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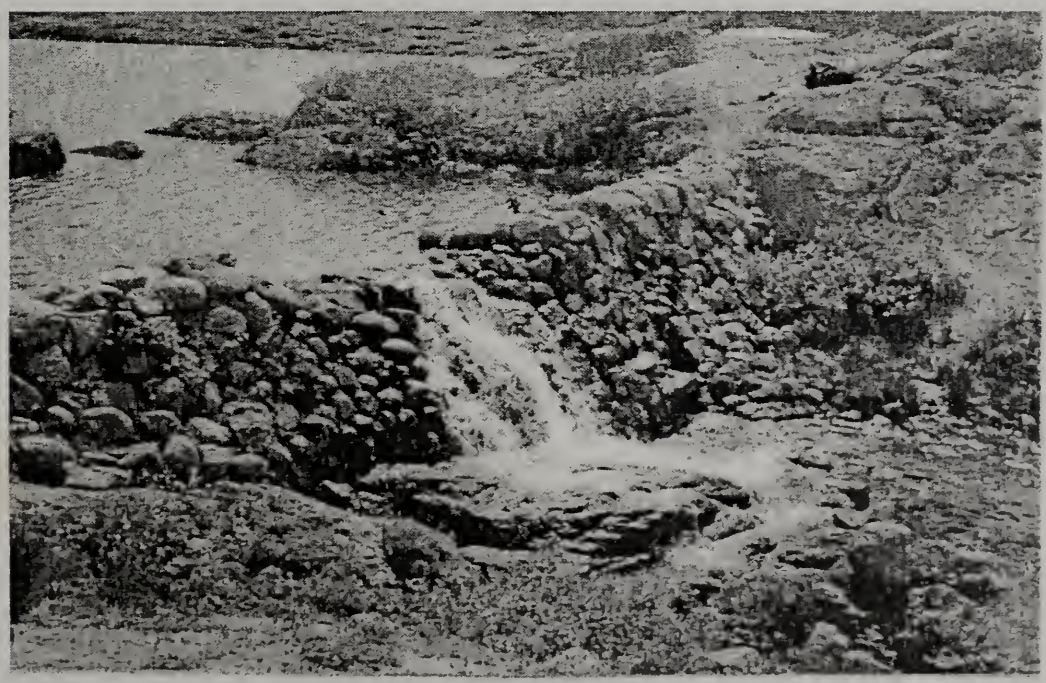
Emigrant Wilderness Dams

Environmental Impact Statement

Record of Decision

Stanislaus National Forest
Summit Ranger District
Tuolumne County, California

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Stanislaus National Forest
Summit Ranger District
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Abstract

An Environmental Impact Statement (EIS) that discusses alternatives for management of 18 existing water development structures (dams) in the Emigrant Wilderness is available for public review in the Forest Supervisor's Office at 19777 Greenley Road, Sonora, CA, 95370. This Record of Decision (ROD) documents the Deciding Officer's decision pertaining to the proposed action identified in the EIS.

The decision selects and modifies Alternative 1 (Proposed Action) by adding maintenance of Red Can dam and dropping maintenance of Cow Meadow and Y-Meadow dams, bringing the total to eleven dams maintained. Maintenance of the eleven dams includes, but is not limited to log removal, mortar replacement, and rock replacement. Seven dams will deteriorate naturally.

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An Environmental Impact Statement (EIS) that discusses alternatives for management of 18 existing water development structures (dams) in the Emigrant Wilderness is available for public review in the Forest Supervisor's Office at 19777 Greenley Road, Sonora, CA, 95370. This Record of Decision (ROD) documents the Deciding Officer's decision pertaining to the proposed action identified in the EIS (1.4 and 2.2.1).

BACKGROUND

The Wilderness Act of 1964 established the National Wilderness Preservation System "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness." On January 3, 1975, Public Law 93-632 (Section 2(b)) designated 106,988 acres as Emigrant Wilderness. At that time, the Congressional Record recognized 18 existing dams. On September 28, 1984, Public Law 98-425 designated an additional 6,100 acres as part of the Emigrant Wilderness. Congress, which often includes what the disposition of existing structures and uses should be, did not address the Emigrant Wilderness dams in either Act.

The Emigrant Wilderness contains over 100 named lakes[1], which is one of the highest ratios of lakes per Wilderness unit in the Sierra Nevada. Between 1920 and 1951, 18 small dams were constructed to develop fisheries and to sub-irrigate meadows. Of the original 18 dams, 15 are associated with lakes. All of these, with the exception of Y-Meadow, impounded water on naturally existing lakes.

Three types of dams were constructed in the Emigrant Wilderness:

- **Streamflow Augmentation**: twelve structures (Bear, Bigelow, Emigrant, Emigrant Meadow, High Emigrant, Huckleberry, Leighton, Long, Lower Buck, Middle Emigrant, Snow, and Y-Meadow), including gate valves to regulate streamflow, with the intent to increase downstream flow during dry weather in late summer or early fall to sustain downstream fisheries.
- **Lake Level**: three structures (Cow Meadow, Red Can, and Yellowhammer) add approximately 3 feet of height to existing natural lakes and do not regulate downstream flows.
- **Meadow Maintenance**: three structures (Cooper Meadow, Horse Meadow, and Whitesides Meadow), located in stream channels at the lower end of meadows, with the intent to raise the water table and sub-irrigate the meadows.

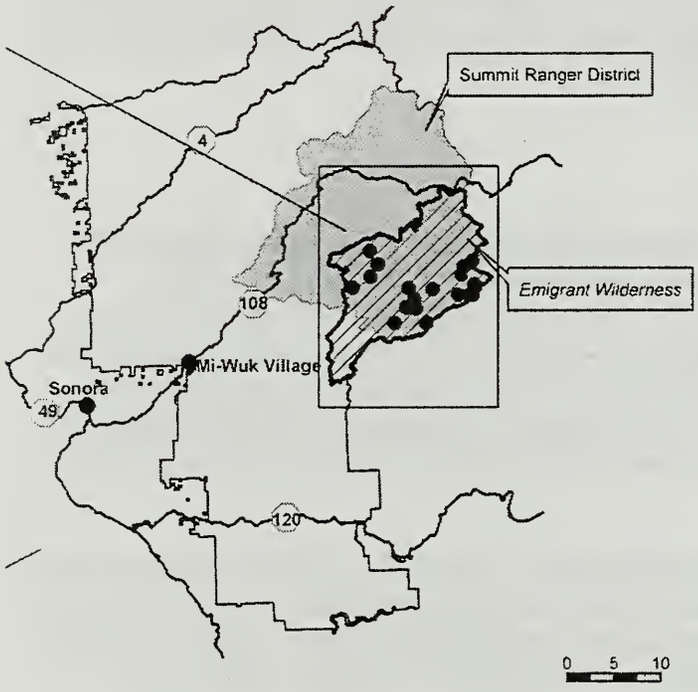
Six of the lakes actually contain a series of dams, not just a single dam: 5 at Bigelow, 4 at Cow Meadow, 2 at Horse Meadow, 7 at Huckleberry, 8 at Long, and 12 at Snow.

[1] The Emigrant Wilderness contains over 500 small, unnamed lakes.

Location

The Emigrant Wilderness borders Yosemite National Park on the south, the Toiyabe National Forest on the east, and State Highway 108 on the north. The Emigrant Wilderness is an elongated area that trends northeast about 25 miles long and up to 15 miles wide. Watersheds drain to the Stanislaus and Tuolumne rivers. The Wilderness is entirely within Tuolumne County (Map R-1).

Map R-1 Vicinity



Purpose and Need for Action

The EIS (1.3) describes the Purpose and Need for Action. The Forest Service needs to make a final decision on maintaining or not maintaining 18 dams. As described in the EIS, the following items contribute to generating the purpose and need (why here and why now) for the proposed action.

- Controversy
- Planning History
- Social/Cultural Values
- Forest Plan Direction
- Forest Service (FS)/California Department of Fish and Game (CDFG) Joint Strategy

Proposed Action

As described in the EIS (1.4 and 2.2.1), the Proposed Action is to reconstruct, repair, operate, and maintain 12 dams in the Emigrant Wilderness and to not maintain 6 dams which would deteriorate naturally. Because no special funding is expected for this project, implementation depends upon obtaining funds other than normal Forest Service appropriated dollars. Maintenance and repair work would be accomplished through third party authorizations such as volunteer agreements, special use permits, or Memorandum of Agreements.

Reconstruction, repair, and standard maintenance would be completed using minimum tool and pack-it-in/pack-it-out philosophy. The use of native materials from the immediate vicinity would be utilized whenever possible. No mechanized or motorized equipment would be used (only hand labor) and materials would be packed in using livestock. Any temporary access routes to project sites would be designated by the Forest Service and decommissioned immediately following completion of the work. All activities would be conducted according to existing Forest Service law, regulation, policy, and direction (e.g. group size limits and campfire restrictions).

Decision to be Made

As identified in the Forest Service Manual (FSM), the Forest Supervisor is the Responsible Official for all activities proposed, with the exception of reconstruction of Cow Meadow Dam. Reconstruction of Cow Meadow would be a preliminary recommendation subject to further review and possible modification by the Chief of the Forest Service. Only the Chief may authorize reconstruction of water developments within designated Wilderness (FSM 2323.04b).

The Forest Supervisor, as the Responsible Official, may decide to: (1) select the proposed action, (2) select one of the alternatives, (3) select one of the alternatives after modifying the alternative with additional mitigating measures or combination of activities from other alternatives, or (4) select the no action alternative, choosing to take no action at this time. Table R-1 (below) shows a summary of the alternatives as presented in the EIS (2.2).

Table R-1 Summary of the Alternatives

Dams	Type[2]	Alternatives[3]		
		1	2	3
East Fork Cherry Creek				
Bigelow[1]	SA	**MO**	**N**	**MO**
Horse Meadow	MM	**N**	**N**	**N**
Huckleberry	SA	**MO**	**N**	**N**
Snow	SA	**MO**	**N**	**N**
Middle Fork Cherry Creek				
Leighton[1]	SA	**MO**	**N**	**MO**
Red Can[1]	LL	**N**	**N**	**M**
Yellowhammer	LL	**N**	**N**	**N**
North Fork Cherry Creek				
Cow Meadow	LL	**RM**[4]	**N**	**N**
Emigrant[1]	SA	**MO**	**N**	**MO**
Emigrant Meadow[1]	SA	**MO**	**N**	**MO**
High Emigrant	SA	**MO**	**N**	**N**
Middle Emigrant	SA	**MO**	**N**	**N**
West Fork Cherry Creek				
Long[1]	SA	**MO**	**N**	**MO**
Lower Buck[1]	SA	**MO**	**N**	**MO**
Lily Creek				
Bear	SA	**N**	**N**	**N**
Y-Meadow	SA	**MO**	**N**	**N**
South Fork Stanislaus River				
Cooper Meadow	MM	**N**	**N**	**N**
Whitesides Meadow	MM	**N**	**N**	**N**

[1] Eligible for the National Register of Historic Places (NRHP)

[2] SA=Streamflow Augmentation, MM=Meadow Maintenance, LL=Lake Level

[3] **MO**=Maintain, Repair and Operate; **N**=No Maintenance **RM**=Reconstruct and Maintain

[4] Reconstruction of Cow Meadow would be a preliminary recommendation subject to further review and possible modification by the Chief of the Forest Service. Only the Chief may authorize reconstruction of water developments within designated Wilderness (FSM 2323.04b).

DECISION

As the Forest Supervisor for the Stanislaus National Forest, I am the Responsible Official deciding what actions to implement to either maintain or not maintain 18 dams in the Emigrant Wilderness. Prior to making my decision, I reviewed the purpose and need, proposed action, alternatives, and environmental consequences. I considered all public comments on the Draft EIS. In addition, I consulted with the Summit District Ranger, Summit Ranger District staff, Forest Supervisor's Office staff, Regional Office staff, members of the public, legislative contacts, and representatives of other interested government agencies.

Based upon this review, I decided to select Alternative 1 (Proposed Action) with the modifications described below and hereafter-called Alternative 1 (Modified).

Alternative 1 (Modified)

Alternative 1 (Modified) includes the following modifications:

- Maintenance of Red Can Dam
- No maintenance of Cow Meadow Dam
- No maintenance of Y-Meadow Dam
- Modifies the mitigation measures (EIS 2.3) as shown in the following section.

This decision maintains eleven dams, while allowing seven dams to deteriorate naturally (see Table R-2 below). It also authorizes issuance of Volunteer Agreements, Special Use Permits, or Memorandum of Agreements, necessary to accomplish the approved activities.

Table R-2 Alternative 1 (Modified)

Alternative 1 (Modified)	
Maintain	**No Maintenance**
1. Bigelow 2. Emigrant 3. Emigrant Meadow 4. High Emigrant 5. Huckleberry 6. Leighton 7. Long 8. Lower Buck 9. Middle Emigrant 10. Red Can 11. Snow	1. Bear 2. Cooper Meadow 3. Cow Meadow 4. Horse Meadow 5. Whitesides Meadow 6. Yellowhammer 7. Y-Meadow

Table R-3 (see page 5) shows a summary of the maintenance, repair and operation activities, using the definitions below, included in this decision.

- **Maintain** - routine activities such as log removal, mortar replacement and rock replacement.
- **Repair** - activities necessary to restore the structure to its original full functioning condition, such as valve replacement and slide-gate replacement.
- **Operate** - includes spring sediment flushing and operation of the valve for flow release in late summer or early fall when sustained low stream flow[1] occurs.

[1] **Sustained low stream flow** is the second or successive consecutive summer/fall periods when flow is lower than a specified rate for more than a specified number of days. The Forest Service will formulate criteria and operation guidelines for flow regulation jointly with the CDFG consistent with the FS/CDFG Joint Strategy.

Table R-3 Summary of the Decision

Dams	Type[2]	Decision[3]	Initial Activities
East Fork Cherry Creek			
Bigelow[1]	SA	**MO**	Replace slide-gate and frame, outlet valve, control shaft/wheel, and sleeve outlet conduit. Replace missing rocks. Seal mortar on upstream face.
Horse Meadow	MM	**N**	None
Huckleberry	SA	**MO**	Replace outlet valve, control shaft/wheel, and sleeve outlet conduit. Replace missing rocks. Seal mortar on upstream face.
Snow	SA	**MO**	Replace outlet slide-gate, control stem, control wheel, and sleeve outlet conduit. Seal mortar on upstream and downstream face.
Middle Fork Cherry Creek			
Leighton[1]	SA	**MO**	Replace outlet valve, control shaft/wheel, and sleeve outlet conduit. Disassemble and rebuild dam. Construct control works well shaft. Seal mortar on upstream face.
Red Can[1]	LL	**M**	Log removal
Yellowhammer	LL	**N**	None
North Fork Cherry Creek			
Cow Meadow	LL	**N**	None
Emigrant[1]	SA	**MO**	Stabilize mortar downstream face of dam. Repair spillway dike. Seal mortar on upstream face.
Emigrant Meadow[1]	SA	**MO**	Replace outlet valve. Replace control shaft/wheel. Insert plastic pipe into existing outlet conduit. Seal mortar on upstream face.
High Emigrant	SA	**MO**	Replace outlet valve, control shaft/wheel, and sleeve outlet conduit. Rebuild outlet control works well shaft. Seal mortar on upstream face.
Middle Emigrant	SA	**MO**	Rebuild failed left side of dam. Insert plastic pipe into existing outlet conduit. Replace outlet valve. Seal mortar on upstream face.
West Fork Cherry Creek			
Long[1]	SA	**MO**	Replace outlet valve, control shaft/wheel, and sleeve outlet conduit. Repair control works well shaft. Seal mortar on upstream face.
Lower Buck[1]	SA	**MO**	Replace outlet valve, control shaft/wheel, and sleeve outlet conduit. Remove logs. Seal mortar on upstream face.
Lily Creek			
Bear	SA	**N**	None
Y-Meadow	SA	**N**	None
South Fork Stanislaus River			
Cooper Meadow	MM	**N**	None
Whitesides Meadow	MM	**N**	None

[1] Eligible for the NRHP: Repairs on these dams follow the Secretary of the Interior Standards for Treatment of Historic Properties (36 CFR 68). Repair or replacement materials are in-kind when possible. Plastic pipe used as a conduit insert is unseen and of black material which blends into the background.

[2] SA=Streamflow Augmentation, MM=Meadow Maintenance, LL=Lake Level

[3] **MO**=Maintain, Repair and Operate; **N**=No Maintenance

Mitigation Measures

In order to avoid or minimize environmental effects, this decision includes the following mitigation measures:

1. Use only native materials to maintain the dams.
2. Do not use large boulders and rock faces as a source for smaller rocks. (i.e., large rocks may not be blasted, sledge hammered, or by any other means broken into smaller rocks).
3. Permit the use of stock to deliver materials to the project site, and require that all stock holding occur outside the 300-foot perimeter project area around each dam.
4. Do not use rock sleds off existing trails.
5. Use only campsites and temporary access routes to the project designated by the Forest Service and decommission any temporary access routes immediately following completion of the work.
6. Use only certified weed-free hay and feed.
7. Implementation activities must be consistent with Emigrant Wilderness Standards and Guidelines and existing Forest Orders.
8. Clean all tools and equipment, outside the Wilderness, to prevent non-native plant species from entering the Wilderness.
9. Collect sod, from designated areas, in strips on the contour to increase the ability of adjacent plants to recolonize readily. Alternate the strips with intact vegetation to collect sediment and to avoid channeling water downhill.
10. Protect sensitive plants found in the project areas.
11. Do not collect rocks on the southeast side of Snow Lake.
12. Use colors as agreed to in the Memorandum of Agreement with the State Historic Preservation Office for dams eligible for the NRHP. Use mortar colors that match the surroundings for dams not eligible for the NRHP.
13. Complete a Heritage Resources survey if collecting rock/materials outside the 300-foot perimeter project area.
14. Use only non-reflective materials that color-match the surrounding area.
15. Provide public notification before work occurs at each dam.
16. Keep temporary trails out of meadow areas in known Yosemite Toad (YT) habitats at all Emigrant lakes and Snow.
17. Implement Best Management Practices (BMPs) to limit erosion and sedimentation; protect water quality; and, minimize lake and stream channel disturbances (see Best Management Practices, EIS 3.1.3.5.).
18. Allow operation of the valves for flow releases in late summer or early fall only when sustained low stream flow occurs. Formulate criteria and operation guidelines for flow regulation jointly with the CDFG consistent with the FS/CDFG Joint Strategy.

REASONS FOR THE DECISION

In order to avoid or minimize environmental effects, my decision selects Alternative 1 (Proposed Action) with the modifications described below. The following sections present my reasons for the decision.

Maintenance of Red Can Dam

Maintenance of Red Can dam protects and preserves all seven dams that are eligible for inclusion on the NRHP. It also responds to public comments and avoids an adverse affect on an eligible historic property.

No Maintenance of Cow Meadow Dam

Cow Meadow's main dam would require reconstruction, as it no longer exists. The original dam, at 3 feet tall, added 13% to the natural lake volume. The fishery is naturally reproducing at the current, natural lake level. MYLF is present in the area surrounding the lake. Reconstructing and maintaining this dam would result in a loss of 18 acres of riparian habitat that is currently recovering. Not reconstructing this dam contributes to an overall decrease in influences on the natural hydrologic regime of the watershed.

No Maintenance of Y-Meadow Dam

Y-Meadow forms the headwaters of Lily Creek, which is included in the proposed Clavey Wild and Scenic River System. No fishery exists in Y-Meadow Lake and the CDFG indicates they have no plans for future stocking. Y-Meadow is the only dam that created a lake where no natural lake previously existed. The water developments at Bear and Y-Meadow inundate about 70% of the meadow acreage along Lily Creek in the Emigrant Wilderness. Deterioration of both Bear and Y-Meadow dams eventually allows ecosystems (plants and animals) to respond to natural forces and return to pre-dam conditions in the entire Lily Creek watershed.

Modifies the Mitigation Measures

I modified the mitigation measures to correspond to my decision and to provide additional clarification. I also added a mitigation measure to address flow regulation.

I considered, weighed and balanced the following factors, posed as questions and discussed in the following sections, in arriving at this decision. These questions replace those shown in the draft EIS (1.5.2) in order to provide a thorough presentation of my reasons for this decision.

1. Does the decision meet **Law, Regulation and Policy**?
2. Does the decision meet the **Purpose and Need for Action**?
3. How does the decision avoid or minimize **Environmental Effects**?
4. Does the decision address aquatic resources and hydrologic processes using a **Watershed Approach**?
5. Does the decision consider structures as necessary to meet **Minimum Requirements**[1]?
6. Does the decision consider any **Other Factors**?

1. Law, Regulation and Policy

My decision is consistent with applicable law, regulation and policy as described below. It moves the Emigrant Wilderness, as a whole, towards a more pristine condition by allowing the deterioration of 7 of the original 18 dams.

The Wilderness Act of 1964 (Purposes)	The Decision...
1. Shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness.	...does not reduce the opportunity for the American people to use and enjoy the Emigrant Wilderness as Wilderness.
2. To provide for the protection of these areas.	...does not affect the ability to protect the wilderness.
3. To provide for the preservation of their wilderness character.	...protects and perpetuates wilderness character by protecting and preserving their historic values (maintenance of all 7 dams eligible for the NRHP) and providing opportunities for on site education. Maintaining the 4 non-eligible dams does not directly affect or change the existing wilderness character but does protect and perpetuate some public values. The 7 no maintenance dams eventually perpetuate more wilderness character. Opportunities for primitive recreation experience at the 11 lakes with maintained dams will not change.
4. To provide for the gathering and dissemination of information regarding their use and enjoyment as wilderness	...does not affect this purpose.

[1] Section 4(c) of the Wilderness Act broadly identifies prohibitions within Wilderness. "... **except as necessary to meet minimum requirements for the administration of the area** for the purpose of this chapter ... there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."

Forest Service Manual Goals and Objectives (FSM 2320.2-3)	The Decision...
1. Maintain and perpetuate the enduring resource of wilderness as one of the multiple uses of NF System land.	...maintains and perpetuates wilderness as one of the multiple uses.
2. Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.	...eventually allows plants and animals to respond to natural forces at 7 no maintenance dams. Maintenance of 11 dams does not maintain Wilderness so that plants and animals respond to natural forces; however, the EIS shows that environmental effects are non-significant.
3. Protect and perpetuate wilderness character and public values including, but not limited to, opportunities for scientific study, education, solitude, physical and mental challenge and stimulation, inspiration, and primitive recreation experienced.	...protects and perpetuates wilderness character by protecting and preserving their historic values (maintenance of all 7 dams eligible for the NRHP) and providing opportunities for on site education. Maintaining 4 dams not eligible for the NRHP does not directly affect or change the existing wilderness character but does protect and perpetuate some public values. The 7 no maintenance dams eventually perpetuate more wilderness character. Opportunities for primitive recreation experience at the 11 lakes with maintained dams will not change.

Forest Service Manual Policy for Managing Wilderness (FSM 2320.2-3)	The Decision...
1. Where there are alternatives among management decision, wilderness values shall dominate over all other considerations except where limited by the Wilderness Act, subsequent legislation, or regulations.	...allows wilderness values to dominate in the context of the entire Emigrant Wilderness. The 7 dams eligible for the NRHP are legitimate considerations as heritage resources, an accepted wilderness value. The 4 other maintained dams improve natural reproduction capabilities within existing fisheries, which supports consideration by CDFG to reduce or eliminate the need for fish stocking. Wilderness values dominate for the 7 no maintenance dams.
2. Cease uses and activities and remove existing structures not essential to the administration, protection, or management of wilderness for wilderness purposes or not provided for in the establishing legislation.	...provides the minimum requirement determination while the EIS presents the site-specific analysis. It ceases uses at 7 of the original 18 dams. The 7 maintained dams eligible for the NRHP, protect and preserve historic values for future interpretative, educational and scientific benefits. The 4 other maintained dams improve natural reproduction capabilities within existing fisheries, which supports consideration by CDFG to reduce or eliminate the need for fish stocking.
3. Manage the use of other resources in wilderness in a manner compatible with wilderness resource management objectives.	...allows for the management of other resources in a manner compatible with management objectives (see Forest Plan Consistency on page 23).

2. Purpose and Need for Action

The EIS (1.3) identifies a combination of items generating the Purpose and Need for Action (why here and why now). My decision to implement Alternative 1 (Modified) meets the Purpose and Need for Action by addressing each of the items as discussed below.

Controversy

The EIS (1.3.1) describes and identifies a need to resolve the continuing controversy surrounding management of the Emigrant Wilderness dams. Alternative 1 (Modified) responds to this item by allowing maintenance, repair and operation of 11 dams, while allowing 7 dams to deteriorate naturally.

Planning History

The EIS (1.3.2) describes and identifies a need for site-specific direction for management of the dams. Alternative 1 (Modified) meets the Purpose and Need for Action by providing this site-specific direction.

Social/Cultural Values

The EIS (1.3.3) describes and identifies a need to address social/cultural values associated with recreational fisheries and historic resources. Alternative 1 (Modified) meets the Purpose and Need for Action by addressing those values. It considers recreational fisheries within the context of the FS/CDFG Joint Strategy (see below). It addresses cultural values by preserving all seven dams that are eligible for the NRHP.

Forest Plan Direction

The EIS (1.3.4) describes and identifies a need to implement the Forest Plan. Alternative 1 (Modified) meets the Purpose and Need for Action by implementing the Forest Plan. It is consistent with, and conforms to the applicable Forest Goals, Management Emphasis, and Standards and Guidelines from the current Forest Plan (see Forest Plan Consistency on page 23).

FS/CDFG Joint Strategy

The EIS (1.3.5) describes and identifies a need to move forward on the FS/CDFG Joint Strategy. Both the FS and CDFG favor naturally reproducing fisheries to reduce impacts on natural processes (EIS Appendix A). CDFG has the authority and responsibility for management, including stocking, of indigenous fisheries[1] in the Emigrant Wilderness.

Table R-4 (see page 11) shows a summary of this cooperative framework for future management decisions. Alternative 1 (Modified) meets the Purpose and Need for Action by moving forward on the FS/CDFG Joint Strategy.

[1] The Forest Service Manual (FSM 2640, 2320) and the Interagency Guidelines for Fish and Wildlife Management in Wilderness, define indigenous fisheries as "traditionally stocked before wilderness designation if the species is likely to survive".

Table R-4 Summary of FS/CDFG Joint Strategy

Maintenance[1]		No Maintenance[2]	Data Needed[3]
Bigelow	Leighton	Bear	Cow Meadow
Emigrant	Long	Cooper Meadow	High Emigrant
Emigrant Meadow	Lower Buck	Horse Meadow	Snow
Huckleberry	Middle Emigrant	Red Can	Y-Meadow
		Whitesides Meadow	
		Yellowhammer	

[1] Maintenance may be warranted pending site-specific analysis

[2] No maintenance needed for fisheries

[3] Additional data needed to determine whether maintenance may be warranted

My decision addresses the Joint Strategy as follows.

Maintenance

My decision confirms that maintenance is warranted on eight dams [Bigelow, Emigrant, Emigrant Meadow, Huckleberry, Leighton, Long, Lower Buck, and Middle Emigrant] based on the site-specific analysis (see Table R-4 above, Joint Strategy, Maintenance[1]) contained in the EIS.

My decision determines that maintenance is warranted on two dams [High Emigrant and Snow] based on the site-specific analysis and the additional information (see Table R-4 above, Joint Strategy, Data Needed[3]) contained in the EIS.

The site-specific analysis (see Table R-4 above, Joint Strategy, No Maintenance[2]) contained in the EIS confirms that maintenance of Red Can Dam is not needed for fisheries. However, my decision to maintain Red Can is based on its historic value.

No Maintenance

My decision confirms that no maintenance is needed for fisheries on five dams [Bear, Cooper Meadow, Horse Meadow, Whitesides Meadow, and Yellowhammer] based on the site-specific analysis (see Table R-4 above, Joint Strategy, No Maintenance[2]) contained in the EIS.

My decision determines that maintenance is not warranted on two dams [Cow Meadow and Y-Meadow] based on the site-specific analysis and the additional information (see Table R-4 above, Joint Strategy, Data Needed[3]) contained in the EIS.

3. Environmental Effects

The EIS (Chapter 3) discusses the physical, biological, social, and economic environments and the effects of implementing each alternative on that environment. It also presents the scientific and analytical basis for the comparison of alternatives presented in the EIS (2.5). Table R-5 (see page 13) compares the effects of this decision along with the three alternatives considered in detail in the EIS As shown in that table, effects, if any, are short term while no effects exist for those indicators or dams not listed. The following Watershed Approach section shows a summary of effects on aquatic resources and hydrologic processes.

Based on the analysis in the EIS (Chapter 3), Alternative 1 (Modified) avoids or minimizes environmental effects as follows.

- Alternative 1 (Modified) results in positive environmental effects through the eventual deterioration of seven dams.
- With the mitigation measures included with Alternative 1 (Modified), significant effects, either positive or negative, are not likely. Non-significant effects, if any, are short term.
- Allowing deterioration of 7 of the original 18 dams, improves natural hydrologic functions and processes in 5 of the 6 affected watersheds, moving the Emigrant Wilderness, as a whole, towards a more pristine condition.
- With deterioration of Cooper Meadow and Whitesides Meadow dams, the South Fork Stanislaus River watershed, within the Emigrant Wilderness, returns to unimpaired hydrologic systems.
- With deterioration of Bear Lake and Y-Meadow Lake dams, the Lily Creek watershed, within the Emigrant Wilderness, returns to unimpaired hydrologic systems.
- Deterioration of other dams reduces ecosystem effects in the East Fork Cherry Creek, Middle Fork Cherry Creek and North Fork Cherry Creek watersheds.

Table R-5 Summary of Effects

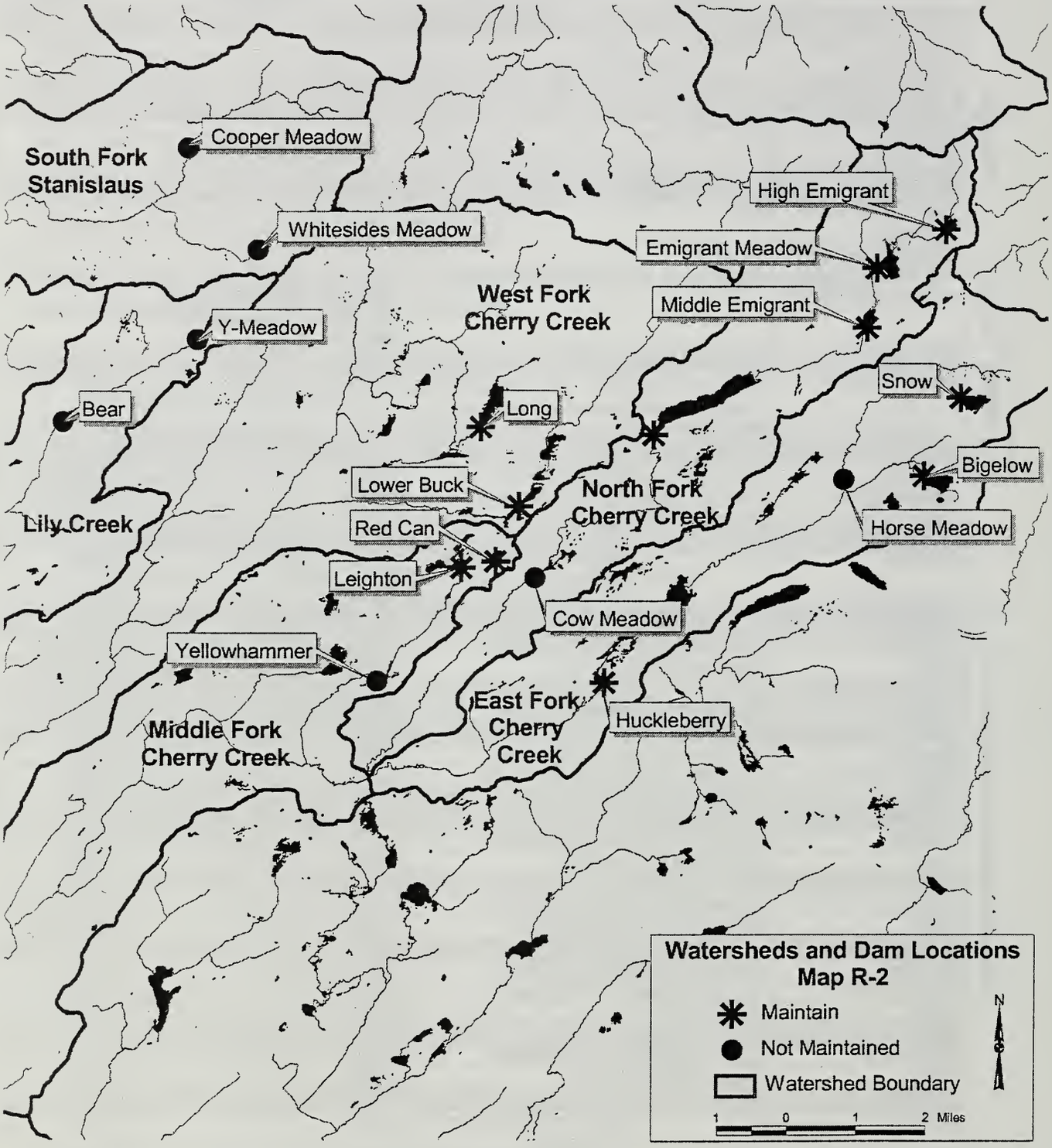
	Resource Indicator	Alternative 1 (Modified)	Alternative 1 (Proposed Action)	Alternative 2 (No Action)	Alternative 3 (Heritage)
Watershed	**Cherry Creek Watershed**				
	Hydrologic Function Restoration	Moderate	Low	High	Moderate
	Riparian Restoration	+20 acres	-14 acres	+147 acres	+48 acres
	Lily Creek Watershed				
	Hydrologic Function Restoration	Moderate			
	Riparian Restoration	+6 acres			
	South Fork Stanislaus River Watershed				
	Hydrologic Function Restoration	High			
	Riparian Restoration	+3 acres			
Heritage	Any Adverse Effects under 36 CFR 800.5?	None	Yes on one: Red Can	Yes on seven: Bigelow, Emigrant, Emigrant Meadow, Leighton, Long, Lower Buck and Red Can	None
Wildlife	Bald Eagle	May affect but not likely to adversely affect		None	Same as 1
	Sensitive Species	May affect individuals[1], but not likely to result in loss of viability, nor cause trend toward federal listing		May have beneficial impact[2]	Same as 1
Wilderness Opportunity Class Standards[3]	**Bigelow**				
	Crowding	Opportunity for solitude decreases		None	Same as 1
	Campsite/Stock	Vegetation loss and site degradation		None	Same as 1
	Trails	Social trails may develop		None	Same as 1
	Cow Meadow				
	Crowding	None	Opportunity for solitude decreases	None	None
	Campsite/Stock	None	Potential vegetation loss	None	None
	Emigrant				
	Crowding	Opportunity for solitude decreases		None	Same as 1
	Trails	Social trails may develop		None	Same as 1
	Emigrant Meadow				
	Crowding	Opportunity for solitude decreases		None	Same as 1
	High Emigrant				
	Crowding	Opportunity for solitude decreases		None	None
	Campsite/Stock	Vegetation loss and site degradation		None	None
	Trails	Social trails may develop		None	None
	Huckleberry				
	Crowding	Opportunity for solitude decreases		None	None
	Trails	Social trails may develop		None	None
	Leighton, Long, Lower Buck				
	Crowding	Opportunity for solitude decreases		None	Same as 1
	Trails	Compaction and vegetation loss		None	Same as 1
	Middle Emigrant				
	Crowding	Opportunity for solitude decreases		None	None
	Campsite/Stock	Vegetation loss and site degradation		None	None
	Trails	Compaction		None	None
	Snow				
	Crowding	Opportunity for solitude decreases		None	None
	Trails	Social trails may develop		None	None
	Y-Meadow				
	Crowding	None	Opportunity for solitude decreases	None	None
	Trails	None	Compaction and vegetation loss	None	None

[1] Great gray owl, goshawk, mountain yellow-legged frog, and Yosemite toad

[2] Great gray owl, mountain yellow-legged frog, Yosemite toad, pallid bat, and Townsend's big eared bat

[3] **Effects, if any, are short term. No effects exist for those indicators or dams not listed.**

Map R-2 Watersheds and Dam Locations



4. Watershed Approach

I also considered each dam in the context of its relationship to the watershed (see Map R-2 on page 14) it occupies and its effects on aquatic resources and hydrologic processes.

Allowing deterioration of 7 of the original 18 dams, improves natural hydrologic functions and processes in 5 of the 6 affected watersheds, moving the Emigrant Wilderness, as a whole, towards a more pristine condition. With deterioration of Cooper Meadow, Whitesides Meadow, Bear Lake and Y-Meadow Lake dams, the South Fork Stanislaus River and Lily Creek watersheds, within the Emigrant Wilderness, return to unimpaired hydrologic systems. Deterioration of other dams reduces ecosystem effects in the East Fork Cherry Creek, Middle Fork Cherry Creek and North Fork Cherry Creek watersheds.

Although potential listing of the MYLF and YT (Forest Service sensitive species) as threatened or endangered species could affect Emigrant Wilderness fisheries in the future, I based my decision on the information contained in the Biological Assessment and Biological Evaluation for this project.

East Fork Cherry Creek Watershed

Within the East Fork Cherry Creek watershed, my decision allows maintenance, repair and operation of Bigelow, Huckleberry, and Snow Lake dams, while allowing Horse Meadow Dam to deteriorate naturally.

Maintaining Bigelow, Huckleberry, and Snow Lake dams enables additional water releases during summer low flows to increase survival and carrying capacity of fish in the headwaters of the East Fork Cherry Creek. The greatest effects on fish occur near the lakes and immediately downstream. Flow increases maintain downstream fish habitat due to greater wetted surface depth.

Huckleberry and Snow lakes currently support self-sustaining (reproducing) populations of rainbow trout and brook trout. Bigelow Lake supports self-sustaining populations of brook trout. Impounded water volume and regulation of streamflow maintain downstream spawning and rearing habitat for naturally reproducing trout populations. This supports consideration by CDFG to reduce or eliminate the need for stocking in this watershed.

Surveys found YT at Snow Lake. Direct effects to the toad are unlikely. Maintenance, repair, and operation of Snow Lake dam do not indirectly affect YT.

Surveys found MYLF at Huckleberry and Snow lakes and Horse Meadow. A low possibility exists for dam maintenance activities at Huckleberry and Snow lakes to result in killing individual MYLF. Maintenance, repair and operation do not indirectly affect MYLF.

Horse Meadow dam never achieved its original intent to sub-irrigate the meadow. This structure is in poor condition with no lake associated. A reproducing brook trout fishery exists in the meadow stream system, which is unrelated to the dam. My decision not to maintain this dam will not result in large influxes of stored sediment into the stream system. The accumulated sediment should stabilize due to re-vegetation as the dam

gradually deteriorates and breaches. Natural deterioration of this dam results in little or no effect on downstream water quality or aquatic habitat.

Middle Fork Cherry Creek Watershed

Within the Middle Fork Cherry Creek watershed, my decision allows maintenance, repair and operation of Leighton Lake Dam and maintenance of Red Can Lake Dam, while allowing Yellowhammer Lake Dam to continue deteriorating naturally.

Fisheries in Leighton, Red Can, and Yellowhammer lakes are stocked and not self-sustaining. Red Can and Yellowhammer dams have no streamflow release valves and serve only as lake level impoundment structures with little impact on streamflow.

Both recreational anglers and the CDFG value Leighton Lake for its rainbow trout fishery. Maintaining this dam protects fishery resources by increasing depth, preventing winter kill and possibly summer kill during high temperatures and low oxygen. Effects to riparian vegetation are minimal.

The site-specific analysis contained in the EIS confirms that maintenance of Red Can Dam is not needed for fisheries. However, my decision to maintain Red Can is based on its historic value. Human influences on aquatic life are unnoticeable. Influences to soils, vegetation, and woody debris accumulation are unnoticeable. The imprint of human influences is unnoticeable.

Yellowhammer Dam was originally a lake level impoundment dam. The sod mortar on this dam washed away sometime between 1977 and 1985. A full reconstruction would be required to return this dam to its original condition. My decision not to maintain this dam protects existing stabilized riparian systems along the lake, while improving connectivity of stream habitat as Yellowhammer Dam continues deteriorating.

North Fork Cherry Creek Watershed

Within the North Fork Cherry Creek watershed, my decision allows maintenance, repair and operation of Emigrant, Emigrant Meadow, High Emigrant, and Middle Emigrant Lake dams, while allowing Cow Meadow Dam to deteriorate naturally.

Emigrant, Emigrant Meadow, High Emigrant, and Middle Emigrant lakes support reproducing populations of trout and are high use destination areas for recreational anglers. Flow management at High Emigrant, in concert with streamflow maintenance dams at Emigrant Meadow, Middle Emigrant and Emigrant lakes, cumulatively benefits fisheries at the lakes and downstream through the watershed. Maintaining storage and release potential at these dams helps maintain or improve in-stream condition for spawning and rearing trout.

Surveys found YT at Emigrant, Emigrant Meadow, High Emigrant, and Middle Emigrant lakes. Maintenance, repair and operation do not indirectly affect YT.

Surveys found MYLF at Cow Meadow, Emigrant, and Middle Emigrant lakes. A low possibility exists for dam maintenance activities at Emigrant and Middle Emigrant lakes to result in killing individual MYLF. Maintenance, repair and operation do not indirectly affect MYLF.

High Emigrant Lake has a rainbow trout population that is not self-sustaining and a brook trout population that is self-sustaining. Unconfirmed rainbow trout/golden trout hybrids have been reported from the outlet stream in addition to rainbow trout. The release of impounded water from High Emigrant is considered important, by CDFG, to successful spawning of trout in Emigrant Meadow Lake downstream. Impounded water volume and regulation of streamflow maintains downstream spawning and rearing habitat for naturally reproducing trout populations. This supports consideration by CDFG to reduce or eliminate the need for stocking in this watershed.

Emigrant Meadow and Middle Emigrant lakes support self-sustaining populations of rainbow trout and brook trout. Impounded water volume and regulation of streamflow maintains downstream spawning and rearing habitat for naturally reproducing trout populations. This supports consideration by CDFG to reduce or eliminate the need for stocking in this watershed.

Emigrant Lake Dam impounds 37% of the current lake volume. Reduction in lake depth would reduce aquatic habitat volume. The fishery is naturally reproducing. Flow from Emigrant Lake benefits the maintenance of aquatic resources in the 6.8 miles of stream down to the confluence with Cherry Creek and including Cow Meadow. Impounded water volume and regulation of streamflow maintains downstream spawning and rearing habitat for naturally reproducing trout populations. This supports consideration by CDFG to reduce or eliminate the need for stocking in this watershed.

The main dam at Cow Meadow Lake was destroyed by past storm events in the late 1990s and the existing lake is at its natural level. The fishery is reproducing at the current natural lake level. Not reconstructing Cow Meadow Lake Dam protects about 18 acres of lakeside riparian area that currently is in the process of reestablishing itself.

West Fork Cherry Creek Watershed

Within the West Fork Cherry Creek watershed, my decision allows maintenance, repair and operation of Long and Lower Buck Lake dams.

Flow out of Long and Lower Buck lakes is important to sustain naturally reproducing fisheries in the lakes immediately downstream (Deer Lake and Wood Lake respectively). The natural flow regimes, plus 650-acre-feet of impounded volume, contribute a significant percentage of flow where they combine in Buck Meadow Creek.

Surveys found MYLF at Long and Lower Buck lakes. A low possibility exists for dam maintenance activities killing individual MYLF. Maintenance, repair and operation do not indirectly affect MYLF.

Long and Lower Buck Lake dams increase the natural lake depths by nearly 33%. Both lakes are popular angling destinations. Fish do not reproduce in the lakes or inlet streams, but CDFG stocked rainbow trout nearly every year since 1950.

My decision maintains the existing condition for fish in Long Lake and improves conditions to downstream fish. Maintenance, repair and operation of Long Lake Dam improve spawning success and egg-to-fry survival at Deer Lake.

CDFG considers maintenance of flow from Lower Buck Lake important to sustain natural reproduction of rainbow trout in Wood Lake. My decision maintains the current fisheries levels in the Lower Buck Lake and outlet stream. Maintenance, repair and operation of this dam sustain a natural reproducing fishery downstream at Wood Lake.

Lily Creek Watershed

Within the Lily Creek watershed, my decision allows Bear and Y-Meadow Lake dams to deteriorate naturally.

Lily Creek, included in the proposed Clavey Wild and Scenic River System, forms the headwaters of the Clavey River. Influences on flows in Lily Creek are substantial since Y-Meadow is the only dam that created a lake where no natural lake previously existed. Bear and Y-Meadow dams inundate about 70% of the meadow acreage along Lily Creek in the Emigrant Wilderness.

My decision restores hydrologic connectivity of the stream below and above Bear Lake dam, as well as, approximately 6 acres of riparian habitat along the perimeter of the lake. The rainbow and brook trout fishery will maintain natural reproduction capabilities at the lake and within the stream.

Y-Meadow Lake Dam alters the natural flow regime within the watershed by altering the quantity and timing of flow downstream from the dam. The dam diminishes nutrient supply for aquatic life and the amount of material available for soil replenishment in and adjacent to Lily Creek. My decision allows restoration of the natural flow regime and restores sediment transport and nutrient supply as the dam deteriorates. My decision does not affect lake fisheries since fish have not existed in this lake since 1993.

Surveys found MYLF below Y-Meadow dam. Allowing deterioration of Bear and Y-Meadow dams eventually returns this stream and lake system to natural conditions. Over time, ecosystems (plants and animals) respond to natural forces and return to pre-dam conditions in the entire Lily Creek watershed within the Emigrant Wilderness.

South Fork Stanislaus River Watershed

Within the South Fork Stanislaus River watershed, my decision allows Cooper Meadow and Whitesides Meadow dams to deteriorate naturally.

Cooper Meadow and Whitesides Meadow dams never achieved their original intent to sub-irrigate the meadows. No fishery is associated with either structure. Reproducing brook trout fisheries exist in the meadow stream system, which are unrelated to the dams. The dams have very little influence on flow regime.

Cooper Meadow Dam, first breached (due to natural storm events) sometime before 1972, continues deteriorating. Sediment fills in behind the remnant dam, to its top, and stream flow now cascades over the stair-stepped foundation. Natural hydrologic processes now occur.

Whitesides Meadow Dam creates a small pond at the lower end of the meadow. This dam affects the natural hydrologic function, sediment transport processes and hydrologic

connectivity within the watershed. Surveys found YT in Whitesides Meadow. Allowing this dam to deteriorate naturally does not indirectly affect YT.

Allowing deterioration of Cooper Meadow and Whitesides Meadow dams eventually returns this stream system to natural conditions. Sediment transport approaches natural conditions in this watershed as these structures gradually deteriorate. Over time, ecosystems (plants and animals) respond to natural forces and return to pre-dam conditions in the entire South Fork Stanislaus River watershed within the Emigrant Wilderness.

5. Minimum Requirements

The Responsible Official may authorize an activity or use listed in Section 4(c) of the Wilderness Act if it is determined necessary to meet minimum requirements for the administration of Emigrant Wilderness as Wilderness. The Minimum Requirement Decision Guide (contained in the project files), a series of worksheets, assisted my determination of whether a dam is necessary to meet minimum requirements for the administration of the area.

The following shows my determinations by groups of similar dams.

Bigelow Lake, Emigrant Lake, Emigrant Meadow Lake, Leighton Lake, Long Lake, Lower Buck Lake and Red Can Lake dams are eligible for the NRHP. They remain as representative samples of the first phase of lake level and streamflow maintenance dams constructed by Fred Leighton and his partner Bill Burnham in the early 1900s. These structures serve as examples of early recreational fishery development efforts in California. Therefore, it is my determination that maintenance, repair and operation of these structures for future interpretative, educational and scientific benefits are necessary to meet minimum requirements for the administration of Emigrant Wilderness as Wilderness.

High Emigrant Lake, Huckleberry Lake, Middle Emigrant Lake, and Snow Lake dams maintain natural reproduction capabilities of existing fisheries, which is beneficial to the Wilderness. This supports consideration by CDFG to reduce or eliminate the need for fish stocking in this watershed. Therefore, it is my determination that maintenance, repair and operation of these structures are necessary to meet minimum requirements for the administration of the Emigrant Wilderness as Wilderness.

Bear Lake, Cow Meadow Lake, Yellowhammer Lake, and Y-Meadow Lake dams affect natural processes without enhancing aquatic, cultural or other wilderness resources. Therefore, it is my determination that maintenance of these structures is not necessary to meet minimum requirements for the administration of the Emigrant Wilderness as Wilderness.

Cooper Meadow, Horse Meadow, and Whitesides Meadow dams do not contribute to their original purpose of meadow enhancement through sub-irrigation. Returning natural processes to these streams benefits associated riparian communities. Therefore, it is my determination that maintenance of these structures is not necessary to meet minimum requirements for the administration of the Emigrant Wilderness as Wilderness.

6. Other Factors

My decision considers social values as expressed by individuals, organized groups, agencies and congressional representatives.

For many people, the Emigrant Wilderness dams collectively form a highly valued cultural connection. Some express the personal value of having a relative who helped build the dams, others articulate a value related to simply knowing that local people were involved and that families have been coming to these places for decades to enjoy the dams. My decision, maintaining 11 dams, responds to this viewpoint by allowing past uses and activities to continue.

For many people, dams in the Wilderness are inappropriate. Many feel that the presence of the dams detracts from the wilderness character and negatively affects natural processes. My decision responds to this viewpoint by allowing deterioration of 7 of the original 18 dams, improving natural hydrologic functions and processes in 5 of the 6 affected watersheds. Over time, ecosystems will respond to natural forces and return to pre-dam conditions in the entire Lily Creek and South Fork Stanislaus River watersheds within the Emigrant Wilderness.

ALTERNATIVES CONSIDERED AND NOT SELECTED

In addition to Alternative 1, I considered the two other alternatives fully developed in the EIS (2.2). The EIS (Chapter 2) contains detailed descriptions, mitigation measures and comparisons of all alternatives. The EIS (Chapter 3) contains detailed descriptions of the affected environment and environmental consequences. Table R-5 (see page 13) compares the effects of my decision along with the alternatives considered in detail in the EIS (2.2). The following provides a brief description of the two other alternatives considered along with my reasons for not selecting them.

Alternative 2 (No Action)

Under Alternative 2 (No Action), no dams would be repaired, maintained, or operated. All 18 dams would deteriorate naturally. Although this alternative is the environmentally preferred alternative, I did not select Alternative 2 (No Action) for the following reasons.

- Alternative 2 (No Action) results in adverse effects under 36 CFR 800.5 for seven dams eligible for the NRHP (Bigelow, Emigrant, Emigrant Meadow, Leighton, Long, Lower Buck and Red Can).
- Alternative 2 (No Action) does not meet the FS and CDFG objective to favor naturally reproducing fisheries to reduce impacts on natural processes (EIS Appendix A).
- Alternative 2 (No Action) does not respond to strong custom, culture and lifestyle interests expressed by many local community members, local agencies and congressional representatives.

Alternative 3 (Heritage)

Alternative 3 (Heritage) includes the repair, maintenance, and operation of the seven dams that are eligible for inclusion on the NRHP. Eleven dams would not be maintained or operated and would deteriorate naturally. Although this alternative maintains all seven dams eligible for the NRHP, I did not select Alternative 3 (Heritage) for the following reasons.

- Alternative 3 (Heritage) does not meet the FS and CDFG objective to favor naturally reproducing fisheries to reduce impacts on natural processes (EIS Appendix A).
- Alternative 3 (Heritage) does not fully respond to strong custom, culture and lifestyle interests expressed by many local community members, local agencies and congressional representatives.

PUBLIC INVOLVEMENT

Public involvement occurred throughout the planning process as described below.

Scoping

In an effort to reach interested individuals and organizations, the Forest mailed approximately 120 scoping letters on January 31, 2003 to request comments on the Proposed Action. In addition, the Forest Service published a Notice of Intent (NOI) in the Federal Register on February 3, 2003[1]. The NOI asked for public comment on the proposal through March 5, 2003. Meanwhile, the Forest issued a press release on February 7, 2003 regarding the Proposed Action and the comment period. Lastly, the Forest's Schedule of Proposed Actions listed this project beginning with Issue 93 in December 2002, and continued the listing in Issues 94 (March 2003), 95 (June 2003), and 96 (September 2003).

Issues

Utilizing comments submitted during the scoping period, the Forest Service separated issues into non-significant and significant issues. Non-significant issues are those: 1) outside the scope of the proposed action; 2) already determined through law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; 4) conjectural and not supported by scientific or factual evidence; or 5) general comment. Significant issues are those used to generate alternatives and are directly or indirectly caused by implementing the proposed action. This decision addresses the significant issues as described below.

1. **Natural Processes**: The seven dams eligible for the NRHP are legitimate considerations as heritage resources, an accepted wilderness value. Wilderness values (unimpaired natural processes) dominate for seven no maintenance dams. Other values dominate for four of the maintained dams (recreation, fisheries). My decision continues affecting ecosystems in 4 of the 6 watersheds. However, allowing deterioration of 7 of the original 18 dams, improves natural hydrologic functions and processes in 5 of the 6 affected watersheds, moving the Emigrant Wilderness, as a whole, towards a more pristine condition. With deterioration of Cooper Meadow, Whitesides Meadow, Bear Lake and Y-Meadow Lake dams, the South Fork

[1] Federal Register, Volume 68, Number 22, pages 5267-5269.

Stanislaus River and Lily Creek watersheds, within the Emigrant Wilderness, return to unimpaired hydrologic systems. Deterioration of other dams reduces ecosystem effects in the East Fork Cherry Creek, Middle Fork Cherry Creek and North Fork Cherry Creek watersheds.

2. **Amphibians**: As determined in the Biological Evaluation, Alternative 1 may adversely affect individuals, but is not likely to cause a trend to federal listing or a loss of species viability range wide for the MYLF and YT.
3. **Heritage Resources**: This decision retains Heritage Resource values at all seven of the dams eligible for the NRHP (Bigelow, Emigrant, Emigrant Meadow, Leighton, Long, Lower Buck and Red Can).
4. **Wilderness Character**: Maintenance of seven dams eligible for the NRHP protects and perpetuates wilderness character by protecting and preserving their historic values and providing opportunities for on-site education. Maintaining four non-eligible dams does not directly affect or change the existing wilderness character but does protect and perpetuate some public values. Opportunities for primitive recreation experience at 11 lakes with maintained dams will not change with this decision. Opportunities for primitive recreation experiences at the 7 no maintenance sites will result in little change to existing use patterns. Natural processes eventually improve at 7 no maintenance dams.
5. **Social and Economic**: Economic effects to the local recreation based economy from not maintaining all or any of the 18 dams are insignificant. With an extensive history of local individuals and organizations taking an active role in maintaining and operating the dams, this decision maintains, and possibly increases, these social and cultural values as local volunteers take part in repairing and maintaining the dams.

Response to Comments

The Environmental Protection Agency published a Notice of Availability (NOA) for the Draft EIS in the Federal Register on September 12, 2003[1]; the opportunity to comment ended 45 days following that date, on October 27, 2003. In response to the Forest's request for comments, the public and other agencies submitted 50 individual letters with 227 comments offered (66 non-substantive and 161 substantive). The EIS (Appendix E) includes a Response to Comments.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

Threatened and Endangered Species

A separate Biological Analysis (BA) documents the analysis of threatened and endangered species. The BA identifies the Bald Eagle, *Haliaeetus leucocphalus*, as a Federally Threatened species. Suitable nesting habitat does not occur within the Emigrant Wilderness. The lakes in the Emigrant Wilderness appear used as summer foraging habitat for resident birds. The primary bald eagle activity areas, determined by observations, appear centered on the Emigrant Lake area, although sightings occurred at Deer Lake, Snow Lake, and Relief Reservoir. Human activity around these lakes may cause an eagle to flush from a

[1] Federal Register, Volume 68, Number 177, page 53730.

perch or cease hunting activity in the proximity of people. Maintenance of the dams will cause little disturbance to the eagle. The biological determination concluded that because project activities may affect the quality of foraging habitat in the project area, all alternatives may affect, but are not likely to adversely affect, the bald eagle. The USDI Fish and Wildlife Service concurred with this determination.[1]

Forest Plan Consistency

The Regional Forester approved the Stanislaus National Forest Land and Resource Management Plan (Forest Plan) and Environmental Impact Statement on October 28, 1991. The Forest Plan, as amended, provides direction for Wilderness use and management. As described below, my decision is consistent with, and conforms to, the applicable Management Direction and Emigrant Wilderness Opportunity Class Objectives from the current Forest Plan.

Management Direction	The Decision...
1. Management emphasis, within the Emigrant Wilderness, is to move the Wilderness as a whole toward a more pristine condition by maintaining some areas and moving others to a more pristine Opportunity Class designation.	...by allowing deterioration of 7 of the original 18 dams, improves natural hydrologic functions and processes in 5 of the 6 affected watersheds, moving the Emigrant Wilderness, as a whole, towards a more pristine condition.
2. Maintenance of water impoundment structures will be consistent with the USDA Forest Service/CDFG Joint Strategy.	...meets the Purpose and Need for Action by moving forward on the FS/CDFG Joint Strategy. The EIS and ROD provide the additional site-specific determinations identified in the Joint Strategy (see Table R-4 on page 11).
3. No maintenance activities will occur until site-specific analysis is completed and a determination is made as to whether the structure is necessary to meet the minimum requirements for the administration of the area as Wilderness.	...provides the minimum requirement determination while the EIS presents the site-specific analysis.
4. Dams without a high enough value to warrant retention should be allowed to deteriorate naturally (no maintenance) consistent with FSM direction, rather than removed. If a safety concern dictates removal, conduct the appropriate level of analysis to determine removal method.	...does not actively remove any dams. Without maintenance, seven dams will deteriorate naturally.

[1] United States Department of the Interior, Fish and Wildlife Service, Informal Consultation letter dated December 4, 2003.

Emigrant Wilderness Opportunity Class Objectives	The Decision...
1. Ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces. Localized human uses may have limited effects in some areas.	...by allowing deterioration of 7 of the original 18 dams, improves natural hydrologic functions and processes in 5 of the 6 affected watersheds, moving the Emigrant Wilderness, as a whole, towards a more pristine condition. The EIS shows this project causes no significant effects and only short-term non-significant effects.
2. Human influences on aquatic life and hydrologic processes are minimal	...allows for some continuation of human influences on aquatic life and hydrologic processes, while reducing some of the influences by not maintaining 7 dams.
3. Human influences on soils, vegetation and woody debris accumulation are minimal.	...minimizes human influences on soils, vegetation (including riparian vegetation), and woody debris accumulation.
4. Wildlife use patterns may show seasonal, temporary alterations due to human influences, but are not permanently altered.	...restores some historic wildlife use patterns (the dam systems, constructed prior to Wilderness designation altered some wildlife use patterns) by allowing 7 dams to deteriorate.
5. The imprint of human influences is substantially unnoticeable.	...does not change the substantially unnoticeable character of the dams (considering lakes and streams as the affected areas).
6. Facilities, structures, and signing may be utilized for resource protection, administration, or Wilderness purposes.	...determines that maintenance, repair and operation of 11 structures are necessary to meet minimum requirements for the administration of the Emigrant Wilderness as Wilderness.
7. Management of Historic structures will be consistent with opportunity class objectives.	...maintains 7 dam structures eligible for the NRHP, consistent with opportunity class objectives.

IMPLEMENTATION

Project implementation could begin in the summer of 2004 as funding and participation from interested partners and volunteers develops.

If no appeals are filed within the 45-day time period, implementation of the decision may begin immediately after complying with the timeframes and publication requirements described in 40 CFR 1506.10(b)(2). When an appeal is filed, implementation may occur on, but not before, the 15th business day following the date of appeal disposition (36 CFR 215.2). In the event of multiple appeals, the implementation date is controlled by the date of the last appeal disposition.

ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITIES

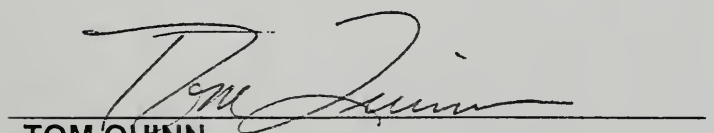
This decision is subject to appeal pursuant to 36 CFR 215. Only those individuals and organizations who submitted substantive written or oral comments during the 45-day comment period (36 CFR 215.6) and otherwise meet the specific requirements of 36 CFR 215.13 have standing to appeal. The Environmental Protection Agency published a Notice of Availability (NOA) for the Draft EIS in the Federal Register on September 12, 2003; the opportunity to comment ended 45 days following that date, on October 27, 2003. Appeals must be filed within 45 days from the publication date of legal notice of this decision in the Union Democrat. Notices of appeal must meet the specific content requirements of 36 CFR 215.14. An appeal, including attachments, must be filed (regular mail, fax, e-mail, hand-delivery, express delivery, or messenger service) with the appropriate Appeal Deciding Officer (36 CFR 215.8) within 45 days following the publication date of the legal notice. The publication date of the legal notice is the exclusive means for calculating the time period to file an appeal (36 CFR 215.15 (a)). Those wishing to appeal should not rely upon dates or timeframe information provided by any other source.

Appeals must be submitted to the Appeal Deciding Officer: Jack Blackwell, Regional Forester, USDA Forest Service, 1323 Club Drive, Vallejo, CA 94592, (707) 562-8737. Appeals may be submitted by FAX [707-562-9091] or by hand-delivery to the Regional Office, at the address shown above, during normal business hours (Monday-Friday 8:00am to 4:30pm). Electronic appeals, in acceptable [plain text (.txt), rich text (.rtf) or Word (.doc)] formats, may be submitted to appeals-pacificsouthwest-regional-office@fs.fed.us [Subject: Emigrant Dams].

INFORMATION CONTACT

For additional information concerning this decision or the Forest Service appeal process, contact John Maschi [jmaschi@fs.fed.us], Forest Planner; Stanislaus National Forest; 19777 Greenley Road; Sonora, CA 95370; (209) 532-3671 ext. 317.

SIGNATURE AND DATE



TOM QUINN
Forest Supervisor

December 16, 2003
Date

USDA
United States
Department of
Agriculture

Forest Service

Pacific
Southwest
Region

Stanislaus
National Forest

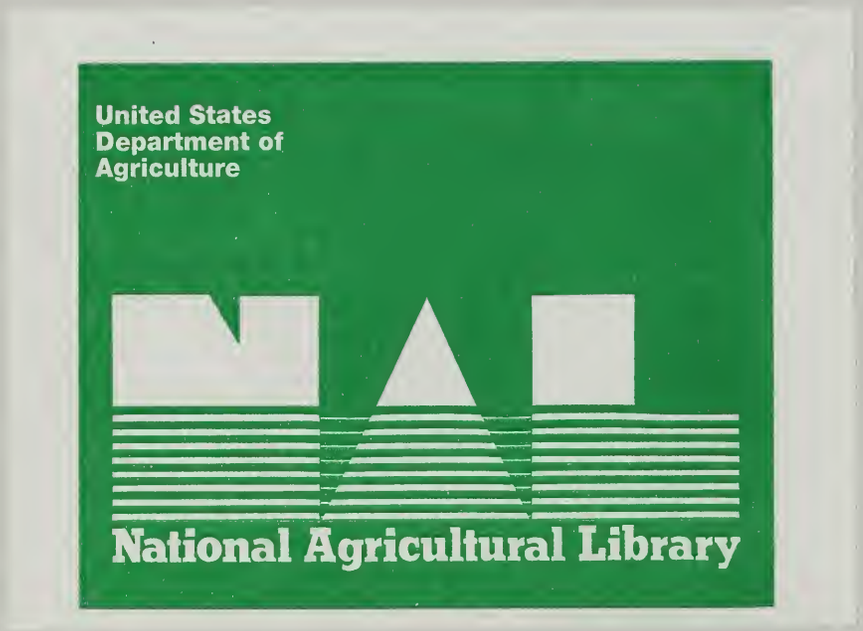
December 2003

Emigrant Wilderness Dams

Environmental Impact Statement

Errata and Response to Comments

Stanislaus National Forest
Summit Ranger District
Tuolumne County, California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Emigrant Wilderness Dams Environmental Impact Statement

Stanislaus National Forest
Summit Ranger District
Tuolumne County, California

Lead Agency: USDA Forest Service

Responsible Official: Tom Quinn, Forest Supervisor
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Information Contact: John J. Maschi, Forest Planner
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Abstract

The Stanislaus National Forest proposes to maintain, repair, and operate 12 dams in the Emigrant Wildemess. The Forest also proposes not to maintain six dams that would be allowed to deteriorate naturally. The 12 dams proposed for maintenance are: Snow, Bigelow, Huckleberry, High Emigrant, Emigrant Meadow, Emigrant Lake, Cow, Leighton, Long, Lower Buck, and Y-Meadow. The six dams proposed for no maintenance include Horse Meadow, Red Can, Yellowhammer, Bear, Cooper, and Whitesides. The EIS also assesses the potential impacts of two alternative scenarios. Alternative 2 (No Action) allows all 18 dams to deteriorate naturally. Alternative 3 emphasizes the maintenance and repair of the seven dams eligible for inclusion on the National Register of Historic Places. These seven dams are Bigelow, Emigrant Meadow, Emigrant Lake, Leighton, Long, Lower Buck, and Red Can. The remaining eleven dams would be allowed to deteriorate naturally under Alternative 3.

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Summit Ranger District
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Errata

The Draft Environmental Impact Statement (DEIS) becomes the Environmental Impact Statement (EIS) with the addition of Appendix E and the following changes.

SUMMARY

The DEIS Summary becomes the EIS Summary with the following changes.

Responsible Official

Replace entire section on page 6 with the following:

As identified in the Forest Service Manual (FSM), the Forest Supervisor is the Responsible Official for all activities proposed, with the exception of reconstruction of Cow Meadow Dam. Reconstruction of Cow Meadow would be a preliminary recommendation subject to further review and possible modification by the Chief of the Forest Service. Only the Chief may authorize reconstruction of water developments within designated Wilderness (FSM 2323.04b).

Wildlife

Delete the second sentence of the first paragraph in the Federally Threatened and Endangered Species section on page 16.

Add to the end of the first paragraph in the Forest Service Sensitive Species section on page 17:

Western red bat, California spotted owl, and willow flycatcher.

ENVIRONMENTAL IMPACT STATEMENT

The DEIS becomes the EIS with the addition of Appendix E and the following changes.

1.5.2. Responsible Official

Replace entire section with the following:

As identified in the Forest Service Manual (FSM), the following responsibilities for approval apply to this project.

- The **Chief** is responsible for approving: Reconstruction of any structure for water control or use, except as provided in FSM 2323.04a (FSM 2323.04b).

- The **Regional Forester** is responsible for approving all measures that implement FSM direction on the use of other resources in wilderness. Specific responsibilities include but are not limited to stabilizing or restoring and subsequently maintaining structures with cultural resources values (FSM 2323.04c). The Regional Forester delegated this authority to the Stanislaus National Forest Supervisor for historic structures in the Emigrant Wilderness (2323 memo dated February 27, 1998).
- The **Forest Supervisor** is responsible for approving: Removal of nonconforming uses, developments, or facilities not under permit. Routine maintenance on any existing water use or water-control structure as long as this maintenance does not change the structure's location, size, or type, or increase the storage capacity of a reservoir (FSM 2323.04d).

Accordingly, the Forest Supervisor is the Responsible Official for all activities proposed, with the exception of reconstruction of Cow Meadow Dam. Reconstruction of Cow Meadow would be a preliminary recommendation subject to further review and possible modification by the Chief of the Forest Service. Only the Chief may authorize reconstruction of water developments within designated Wilderness (FSM 2323.04b).

2.2.1. Alternative 1 - Proposed Action

Add after the sixth paragraph on page 14:

Calculations, for the quantity of sand mortar mix needed to seal mortar upstream faces of dams, use the face area (ft^3) of the dam and a ½-inch thick application of mortar. Mortar would only be applied between rocks, as it currently exists. No mortar would be applied on the face of the rocks.

2.2.3. Alternative 3 - Heritage

Add after the fifth paragraph on page 28:

Calculations, for the quantity of sand mortar mix needed to seal mortar upstream faces of dams, use the face area (ft^3) of the dam and a ½-inch thick application of mortar. Mortar would only be applied between rocks, as it currently exists. No mortar would be applied on the face of the rocks.

3.1.2. Hydrology

Replace references (Gibbs, 1970), (Landers, et al., 1987), and (Suk, et al., 1987) in section 3.1.2.6.2. on page 49 with (USDA 1998 Emigrant Wilderness Management Direction EIS).

3.2.4. Effects to Wilderness Character

Replace first sentence of each watershed sub-section in Cumulative Effects sections 3.2.4.1.2, 3.2.4.2.2 and 3.2.4.3.2 with the following:

Although humans influenced the Emigrant Wilderness environment since they established presence, this analysis uses the activities of the past 10 years to meet CEQ regulation 1508.7 regarding cumulative effects.

3.4.3. Historic Values of Dams

Replace second sentence in the first paragraph with the following:

The 1998 Emigrant Wilderness Management Direction EIS applied an additional strategy to those seven dams to measure their historic value within the Wilderness setting based on a point value system.

3.7.1. Federally Threatened and Endangered Species

Add to the table on page 212:

Species	Habitat	Justification
Central Valley Steelhead - T (Oncorhynchus mykiss)	Rivers of the Central Valley	Outside of elevation range of the species
Delta Smelt - T (Hypomesus transpacificus)	Shallow, open waters of the Upper San Francisco Estuary	Outside of elevation range of the species
Paiute Cutthrout Trout – T (Oncorhynchus (=Salmo) clarki seleniris)	Native only to Silver King Creek and its tributaries (Alpine County)	Project is outside of the geographic range of the species
Central Valley Steelhead - T (Oncorhynchus mykiss)	Rivers of the Central Valley	Outside of elevation range of the species

Add citation to third paragraph on page 213:

U.S. Fish and Wildlife Service, 1986. Recovery Plan for the Pacific Bald Eagle. U.S. Fish and Wildlife Service, Portland, OF. 160 p.

Replace last paragraph on page 213 with the following:

The Forest Plan identifies four major areas of suitable nesting habitat, which encompass approximately 3,000 acres. Individual territories are 300 acres each so these areas have the potential to support 10 pairs of eagles:

1. Middle Fork Stanislaus River: Sandbar Flat Dam and downstream
2. Middle Fork Stanislaus River: Beardsley Reservoir Afterbay to Hells Half Acre
3. Middle Fork Stanislaus River: Above Hells Half Acre to Donnell Reservoir.
4. Cherry Lake: Adjacent areas to the north, south, and east (to the National Park boundary).

The Recovery Plan for the Pacific Bald Eagle (FWS 1986) outlines direction for the bald eagle. This plan, premised on the zone concept, establishes a set of criteria to achieve downlisting or de-listing of the species. The four aforementioned territories are part of the Stanislaus National Forest obligation to meet the Bald Eagle Recovery Plan objectives.

3.7.2. Region 5 Sensitive Species

Add to the last paragraph on page 214:

Western red bat, California spotted owl, and willow flycatcher.

3.7.2.1. Mountain Yellow-Legged Frog

Replace reference (Zeiner et. al.) on page 215 with (CDFG 2002).

3.7.2.2. Yosemite Toad

Replace Habitat Status paragraphs with the following:

Yosemite toads are restricted to the high elevations of the central Sierra Nevada Mountains from 6400-11,300 feet in elevation (Zeiner et al 1988). The habitat of this species is primarily wet meadows, and occasionally seasonal ponds associated with sub-alpine conifer forests. Yosemite toads over winter in the high Sierra using rodent burrows as cover and emerge as soon as snowmelt pools form. Breeding occurs in very shallow waters (2-4 centimeters) such as snowmelt pools in meadows, slow-flowing shallow streams, and the shallow edges of ponds and lakes. Adult toads feed on a variety of insects while tadpoles feed primarily on detritus and algae.

It is estimated that this species is now absent from approximately 50% of its historic range (SNEP 1996). The Fish and Wildlife Service found this species warranted for listing under the Endangered Species Act, but the listing is precluded at this time due to higher priority listing needs (FWS 2002). Among the factors hypothesized to be contributing to the species decline are pesticide drift from the agricultural central valley, cattle grazing, disease, and predation from non-native species (SNEP 1996).

3.7.2.3. Great Gray Owl

Replace reference (Zeiner et. al.) on page 217 with (CDFG 2002).

3.7.2.4 Northern Goshawk

Add:

One Goshawk PAC exists near Kennedy Lake, but this PAC is over 2 miles from the closest project area.

3.7.2.5. Pallid Bat

Replace reference (Zeiner et. al.) on page 218 with (CDFG 2002).

3.7.2.7. Western Red Bat

Replace reference (Zeiner et. al.) on page 219 with (CDFG 2002).

3.7.2.8. California Wolverine

Replace reference (Zeiner et. al.) on page 219 with (CDFG 2002).

3.7.2.9. Pacific Fisher, American Martin, and Sierra Nevada Red Fox

Replace references (Zeiner et. al.) on pages 220-221 with (CDFG 2002).

Add to Species Account - Fisher on page 220:

Photo-detection surveys at 17 sites in 2001-2002 did not detect this species.

Add to Species Account - Marten on page 221:

Martens were detected at 13 of the 17 camera stations in 2001-2002. Seven of these detections were within 5 miles of the Emigrant Wilderness boundary.

Add to Species Account - Sierra Nevada Red Fox on page 221:

Photo-detection surveys at 17 sites in 2001-2002 did not detect this species.

3.7.2.10. Peregrine Falcon

Replace reference (Zeiner et. al.) on page 221 with (CDFG 2002).

Add section 3.7.2.11:

3.7.2.11 California Spotted Owl

Habitat Status

California spotted owls typically occur in mature mixed conifer forests (sea level to 7600 feet) where northern flying squirrels (*Glaucomys sabrinus*) are a primary prey (Zeiner et al 1990). Mature and older forests contain snags with large cavities, large broken-topped trees, and old raven and goshawk nests, which provide suitable spotted owl nest sites, as well as the preferred fungi and lichen foods of northern flying squirrels. The breeding cycle of the California spotted owl extends from mid-February to late September. Disturbance during the egg-laying stage through the incubation stage may result in nest abandonment or failure, when the female spotted owl must remain on the nest.

Species Account

No surveys or sightings of spotted owls occurred within the Emigrant Wilderness. The Stanislaus established 206 Protected Activity Centers (PACs), two of which are within ½ mile of the Emigrant Wilderness boundary.

Add section 3.7.2.12:

3.7.2.12 Willow Flycatcher

Habitat Status

The optimal habitat for the willow flycatcher is broad, open river valleys or wet mountain meadows with lush growth of shrubby willows between 2000 and 10,000 feet elevation. Willows are essential for both nesting and foraging. The presence of standing or slow moving water is an important component of willow flycatcher habitat as majority of the willow flycatcher's diet consists of flying insects that need standing water to breed.

The willow flycatcher breeding season is June through August. Surveys in recent decades indicate that the willow flycatcher population is in serious decline. A 1997 survey detected willow flycatchers at only eight of 144 historic sites (USFS 1998). Declines are attributed to habitat degradation from livestock grazing and loss of riparian habitat.

Species Account

There are no known occurrences of willow flycatcher within the Emigrant Wilderness. Willow flycatchers were detected in Eagle Meadow in 1992, and Willow Meadow in 1993; both of

these meadows are within 2 miles of the Emigrant. In 2002 extensive protocol surveys were conducted at all historic willow flycatcher locations, as well as all suitable habitat within a 5-mile radius. Suitable habitat surveyed within the Emigrant included Horse Meadow, Cow Meadow, Cooper Meadow, Hay Meadow, Upper Relief Meadow and Lower Relief Meadow. No willow flycatchers were detected in these locations. The most recent confirmed willow flycatcher detection on the Stanislaus was in 1997 in Ackerson Meadow, which is over thirteen miles from the Emigrant boundary.

3.7.3. Management Indicator Species

Add to the third sentence in the second paragraph on page 223:

California spotted owl

Delete last sentence from the second paragraph on page 223:

The California spotted owl was determined in the BE not to occur in the Project Area and further analysis will not be done.

3.7.3.1. Pileated Woodpecker

Replace reference (Zeiner et. al.) on page 223 with (CDFG 2002).

3.7.3.3. Western Gray Squirrel

Replace reference (Zeiner et. al.) on page 224 with (CDFG 2002).

3.7.3.8. Golden Eagle

Replace references (Zeiner et. al.) on page 226 with (CDFG 2002).

3.7.5. Effects to Wildlife

3.7.5.1.1. Direct and Indirect Effects

Replace last paragraph on page 230 with the following:

There will be no direct effects on this species at non-maintained dams. Indirect effects have the potential to have negative or positive effects. Reduction in lake levels may reduce fish populations, which would be beneficial to the MYLF, as research has shown that frogs can re-colonize areas if fish populations are reduced. Potential negative effects are that stream regulation may improve fish breeding habitat, lower lake volumes may reduce tadpole over wintering success by increasing the potential that lake waters will freeze, or a reduction in lake volume may crowd the remaining fish and frogs/tadpoles into a smaller area, increasing competition, and tadpole mortality.

Replace second paragraph for Yosemite toad (below table) on page 231 with the following:

Direct effect on YT, including animal mortality and habitat destruction, may occur if maintenance personnel are not careful to avoid rodent burrows and water-filled depressions where YT may be. Indirectly, the quality of habitat in Whitesides meadow may be reduced if the dam deteriorates. The loss of the dam may lower the water table of the meadow, reducing the amount of surface water and potential breeding sites in the meadow. Additionally, reproductive success in this meadow may be reduced if the meadow dries out

more quickly, as there may not be enough time for metamorphosis to occur. Resuming streamflow regulation at lake dams may alter water depth and edgewater habitat of lakes. This may negatively affect Yosemite toads, as it will alter the amount of shallow areas suitable for breeding.

Replace last sentence for Pallid bat, Townsend's big-eared bat, and red bat on page 232 with the following:

This alternative meets the OC objectives for Wildlife Habituation for the three bat species.

Add the following sections:

California Spotted Owl

No documented nesting or foraging of this species occurs within the Emigrant Wilderness; however, marginal habitat may exist. If owls are present near project areas their daytime roosting sites may be disturbed by project activities, but no long-term effects should occur to their habitat. Any negative effects to this species or its habitat because of this project are highly unlikely.

This alternative meets the OC objectives for Wildlife Habituation for the California spotted owl.

Willow Flycatcher

No known populations of willow flycatcher exist in the Emigrant Wilderness, but suitable habitat is present. Over time, the project may result in a change in habitat suitability for the willow flycatcher. Allowing the any of the meadow maintenance dams to deteriorate will alter the hydrology and vegetative composition of the meadow. However, as willow flycatchers are not currently present in the project area, this should not negatively affect the species.

This alternative meets the OC objectives for Wildlife Habituation for the willow flycatcher.

3.7.5.2.1. Direct and Indirect Effects

Replace last sentence of the first MYLF paragraph on page 233 with the following:

Potential negative effects from the project include, stream regulation may improve fish breeding habitat, lower lake volumes may reduce tadpole over wintering success by increasing the potential that lake waters freeze, or a reduction in lake volume may crowd the remaining fish and frogs/tadpoles into a smaller area increasing competition and tadpole mortality.

Add to the end of the first YT paragraph on page 234:

However, not maintaining the meadow maintenance dams may alter the hydrology of existing meadows and reduce the habitat suitability for toads.

Replace Northern Goshawk heading and paragraph on page 234 with the following:

Northern Goshawk and California Spotted Owl

Since there would be no change for these species and no activities would occur to create disturbance, there would be no effect to the Northern Goshawk or California Spotted Owl from Alternative 2.

Add:

Willow Flycatcher

The effects in this Alternative would be similar to those listed for Alternative 1.

3.7.4.2.2 Cumulative Effects

Replace entire section with the following:

The cumulative effects for this alternative would be similar to Alternative 1.

3.7.5.4. Cumulative Effects

Replace entire paragraph with the following:

Over the past century, numerous dams were created on the Stanislaus, Tuolumne, and Mokelumne Rivers. Each dam increased lake habitat, potentially increasing the fish population while simultaneously destroying the habitats present in the drainages flooded because of dam construction. The construction of dams in the Emigrant Wilderness contributed to the cumulative effects of damming streams and rivers across the Stanislaus National Forest. The proposed deterioration of some or all of the Emigrant dams will lessen these cumulative effects by allowing these areas to return to their natural condition.

Cattle actively graze three areas, Cooper Meadow, Whitesides Meadow, and Bear Lake. Cattle often concentrate in wet riparian and meadow areas. This can cause a substantial loss of riparian vegetation, increase erosion, and compact soil. This results in stream channels becoming down cut, which in turn lowers the water table of the surrounding area. This can alter wildlife habitat by reducing the amount of standing water, and reducing the prey base for insect dependent species like flycatchers and bats. A change in the wetness of a meadow can alter its vegetative composition, including the type and size of riparian shrubs present. Drier meadows are more easily accessible by predators, and while this may improve predator habitat by increasing foraging area, it can negatively affect the populations and reproductive success of meadow nesting birds. The Forest Service established Standards and Guidelines to reduce or prevent these effects of grazing (USFS 1991, 2001).

Cattle forage on willows and frequently strip the leaves off their lower branches. Grazing in meadows damages many willows to the point where they can no longer function as cover for bird nest sites, further reducing the quality of the habitat. Because the project may change the water table, it may alter the size and configuration of willows in the meadow. This project will add to the cumulative effects of grazing by further lowering the water table at un-maintained dam sites, and potentially altering vegetative composition, prey base, and overall habitat suitability for willow flycatchers and riparian and meadow edge bird assemblages.

Cattle grazing also affect water quality in many areas. Grazing can result in increased sedimentation through accelerated erosion in stream channels. Cattle also cause nutrient

loading from urination and defecation near streams. This project should not add to these cumulative effects.

Brown headed cowbirds are a bird species associated with domestic livestock. As livestock have moved into previously un-grazed areas, such as the high Sierra, brown-headed cowbirds followed. They are brood parasites, which is a term for a species that lay their eggs in the nest of another species. Willow flycatchers are one of the host species parasitized by cowbirds. Once a cowbird lays an egg in a nest, the cowbird chick out-competes the other young for food, and can cause the host species to abandon the nest (Green et al 2003). The presence of cowbirds lowers the reproductive success of willow flycatchers in areas where they co-exist. Cowbirds are present on the Stanislaus and in the Emigrant Wilderness. This project should not affect the brown-headed cowbird population or its habitat and so will not add to this cumulative effect.

In recent years, amphibian populations have declined worldwide. The mountain yellow-legged frog and Yosemite toad are among those species in decline. Stocking of fish in historically fishless high elevation lakes may be the primary cause of this decline. These non-native fish predate on frog and toad tadpoles and adults. To aid in the survival and recovery of these high elevation amphibian species, the California Department of Fish and Game (CDFG), among other organizations, has eradicated fish using gill netting in select high elevation lakes. CDFG also reduced the number of high mountain lakes stocked and total amount of fish planted. This project has the potential to both contribute to and reduce the cumulative effects of fish populations on the frog. Retaining operational Streamflow Maintenance dams in Alternatives 1 and 3 promotes the reproductive success of fish in the streams by regulating water flow. However, for all alternatives a reduction in lake levels caused by dam deterioration or water release may reduce the amount of habitat and carrying capacity for fish populations.

Chytrid fungus is a disease affecting amphibian species worldwide, and is attributed with causing massive die-offs in amphibian populations in Australia. Chytrid fungus exists on the Stanislaus National Forest. Cattle grazing possibly contribute to the spread of the fungus as cattle move throughout the grazing allotments. Transport of Chytrid could also result from recreational hiking through the Emigrant Wilderness. This project should not add to the cumulative effects of Chytrid fungus.

Other hypotheses for amphibian declines include pesticide drift from the Central Valley, and overexposure to UV light due to the thinning of the ozone layer. This project should not contribute to either of these potential cumulative effects.

The most substantial impact to wildlife in the Emigrant Wilderness is the increasing human use. Approximately 15,000 people visit the Emigrant each year, primarily between June and September. This project will add to these cumulative effects by causing increased disturbance during dam repair. While the level of human-use in the Emigrant Wilderness is not expected to change, over time the loss of some dams may shift visitation patterns in the Emigrant Wilderness as users seek alternate destinations. This may add to the cumulative effect of recreation by increasing use in new areas, and forcing wildlife to move to alternate habitat areas. Considering the size of the Emigrant Wilderness, the large number of alternate destinations, and that change in recreational use should be minor, this project should not appreciably add to these cumulative effects.

The following sections detail cumulative effects specific to individual watersheds.

3.8.1. Introduction

Replace reference (Botti, 1977) on page 238 with (Frazier, 1997).

3.8.7.3.1. Direct and Indirect Effects

Replace reference (Cherry Creek Development - Historical) on page 260 with (Burghduff, 1933).

Add section 3.16:

3.16. References Brought Forward by the Public

During the scoping process and review of the draft EIS, some comment letters included references (shown below in **bold** type) to papers and scientific reports. The Forest Service response follows each reference (copies available in the project files).

- **Bradford, et al. 1998**. Influences of natural acidity and introduced fish on faunal assemblages in California alpine lakes. Canadian Journal of Fisheries and Aquatic Sciences 55:2478-2491.

  This reference describes negative associations of mountain yellow-legged frog to naturally acidic lakes and presence of fish. The project would not affect lake acidity. The Biological Evaluation (BE) discusses effects of fish on the mountain yellow-legged frog using Knapp and Mathews 2000, as a reference.

- **Jennings, M.R. 1996**. Status of amphibians. Pg 921-944. Sierra Nevada Ecosystem Project: Final Report to Congress, Vol II, Assessments and scientific basis for management options. University of California Centers for Water and Wildland Resources, Davis.

  The BE cites this reference as Sierra Nevada Ecosystem Project (SNEP), Final Report to Congress (Davis: University of California, Centers for Water and Wildland Resources, 1996).

- **Knapp and Mathews. April 2000**. Non-native fish introductions and the decline of the mountain yellow-legged frog from within protected areas. Conservation Biology 14:428-438.

  The BE cites this reference.

- **Merigliano, Linda and Kovalicky, Tom. 1993**. Toward an Enduring Wilderness Resource – A Stewardship Primer. Journal of Forestry, February 1993 1pg 16-17.

  The premise of this literature is to use the minimum necessary to evaluate impacts of proposals to the Wilderness resource (in its entirety). The paper proposes Wilderness managers consider several guiding principles before making a decision. For example, fulfilling the purpose of the Wilderness Act and striving for less human interference is a stated principle. The Emigrant Wilderness interdisciplinary team used the minimum necessary process, the language of the Wilderness Act, Forest Service policy, guidelines, and Forest Plan direction to evaluate three alternatives.

- **Moyle, P.B. and P.J. Randall, 1996**. Sierra Nevada Ecosystem Project: Final Report to Congress, Vol II, Assessments and scientific basis for management options, Chapter 34, pg 975-982. Davis: University of California Centers for Water and Wildland Resources.

  This reference discusses Index of Biotic Integrity (IBI) for watersheds along with factors influencing scoring, such as non-native species, dams, and presence of native species. The BE addresses these watershed influences, mainly in the cumulative effects section. The reference provides no new information that would change the analysis.

- **Pope, K.L. and K.R. Matthews. 2002.** Influence of anuran prey on the condition and distribution of Rana muscosa in the Sierra Nevada. Herpetelogica 58 (3) pp. 354-363.

  This reference sites the importance of the presence of other amphibian species larvae to the survival of mountain yellow-legged frogs. It notes the importance of other anuran larvae to the mountain yellow-legged frog diet. It provides no new information that would change the analysis.

- **Sierra Nevada Forest Plan Amendment** – Part 4.4, FEIS Volume 3, Chapter 3, part 4.4, page 214.

  This reference discusses the life history and conservation concerns of mountain yellow-legged frog. It provides no new information that would change the analysis. The BE presents information based on other research (e.g. Knapp and Mathews, 2000), or listed in other references (Federal Register, warranted but precluded determination 2003).

- **USDI Fish and Wildlife Service. 2000**. Yosemite Toad and Mountain Yellow-legged frog were proposed for federal listing as Endangered on October 12, 2000 in Volume 65, Number 198, pgs 60607-60609 and pgs 60603 – 60605.

  The BE uses the current listing determinations for both species (warranted but precluded), cited as Federal Register 2002, 2003.

- **USDA Forest Service**. California Wildlife and their Habitats: Western Sierra Nevada. General Technical Report PSW-37.

  The BE uses more recent information for all species, especially Zeiner et al 1988, 1990.

4.1.1. Interdisciplinary Team Members

Add to the Expanded Interdisciplinary Members table:

Expanded Interdisciplinary Members			
Name	**Contribution**	**Degree(s)**	**Years of Experience**
Richard Wisehart	Civil Engineering	MS Engineering; MS Geology	32
Jody Seels	Wildlife	BS – Molecular Biology and Bioethics	3

References

Replace entire section with the following:

Adams, S. B., C. A. Frissell and B. E. Rieman. 2001. Geography and invasion in mountain streams: consequences of headwater lake fish introductions. Ecology (2001): 296-307.

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Appendix E - Response to Comments

INTRODUCTION

The Environmental Protection Agency published a Notice of Availability (NOA) for the Draft Environmental Impact Statement (DEIS) in the Federal Register on September 12, 2003[1]. The opportunity to comment ended 45 days following that date, on October 27, 2003.

Public notice of the DEIS availability included local newspaper articles, a mailing to those on the Forest's Emigrant Wilderness Dams mailing list, posting on the Forest's internet site [http://www.fs.fed.us/r5/stanislaus], and listing in the Forest's Schedule of Proposed Actions newsletter. In addition, the Forest sponsored a public open house during the comment period.

In response to the Forest's request for comments, the public and other agencies submitted 50 individual letters with 227 comments offered (66 non-substantive and 161 substantive). The EIS includes a Response to Comments as Appendix E. For tracking purposes, the interdisciplinary team assigned a respondent number to each comment. The List of Respondents is included at the end of this Appendix (see Tables E-1 and E-2).

The team reviewed all comments, combined similar comments, and summarized those remaining into brief bullet statements. This Appendix contains these comment statements, organized by the topics shown below, along with the appropriate respondent numbers, followed by the Forest Service response.

1. Alternatives
2. Amphibians
3. Amphibian/TES
4. Botany
5. Costs
6. Fishery
7. Forest Plan or Policy
8. Historic
9. Hydrology
10. Individual Dams
11. Joint Strategy
12. Minimum Necessary
13. Miscellaneous
14. NEPA
15. New Alternatives
16. Social and Economic
17. Visual Resources
18. Wild and Scenic River
19. Wilderness
20. Wilderness Act

[1] Federal Register, Volume 68, Number 177, page 53730.

RESPONSE TO COMMENTS

Alternatives

1. **Comment**: Support Alternative 1 because it:

   - Preserves public recreation values such as backpacking and fishing and causes the least amount of long-term change to user destinations.
   - Preserves late season flows.
   - Preserves and enhances recovery of the Yosemite toad (YT) and mountain yellow-legged frog (MYLF).
   - Enhances the structural integrity and safety of the dams.
   - Preserves historical and cultural values of the dams and provides a tribute to Fred Leighton and Bill Burnham.
   - Does not detract from the natural landscape or wilderness quality of the area, as the dams are inconspicuous and substantially unnoticeable.
   - Most closely reflects the consensus with the community reached in the late 1980s.
   - Does not have any long-term significant effects on the environment.
   - Provides a reasonable compromise and common sense approach.

091203-1	100503-1	102203-1	102703-1
091303-1	100603-1	102203-2	102703-7
092003-1	100903-1	102303-3	
092303-1	101603-2	102303-4	

   Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The Record of Decision (ROD) documents the decision and identifies the reasons for the decision.

2. **Comment**: Support Alternative 2 because it:

   - Doesn't violate the letter and spirit of the Wilderness Act (e.g. Section 4(c) – No permanent man-made structures and Section 2(c) – Provide untrammeled, natural environment). This is the only alternative that conforms to agency policy. It is the only legal alternative.
   - Provides the least harmful effects to habitat and wildlife.
   - Benefits all users of the resource – human and non-human.
   - Provides financial incentives since no money would be needed for maintenance.
   - Improves aquatic habitats and restores the ecosystem functions along the riparian corridors. Other alternatives disrupt the natural timing, variability, and duration of floodplain inundation and water table elevation.
   - Doesn't artificially manipulate stream flows, especially to benefit non-native trout.
   - Doesn't maintain dams that haven't been maintained since 1989. No need to start now.
   - Is consistent with a wilderness area since the dams were constructed to manipulate ecological attributes, such as stream flows, non-native trout, etc.
   - Preserves the wilderness character by allowing the dams, which serve no purpose, to deteriorate.
   - Puts at-risk native amphibians and the preservation of wilderness as a priority over introduced non-native trout.

- Meets the intent of Congress. The dams are not protected in the enabling legislation and Congress intended all 18 dams to disintegrate naturally.

091603-1	101703-1	102603-2	102703-8
091903-1	101803-1	102703-3	
100403-1	102503-2	102703-4	

Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The ROD documents the decision and identifies the reasons for the decision.

Amphibians

3. **Comment**: Alternative 1 will directly interfere with the recovery of YTs and MYLFs. 55% of the inundated acres were originally meadow habitat and these species depend upon wet meadow and riparian habitat free of trout in order to survive. Not only will the artificial structures of checkdams incrementally increase trout populations and thus predation on tadpoles, but the artificial manipulation of streamflows add to the direct effect on species that have been determined to warrant listing by the US Fish and Wildlife Service. Identify mitigation measures for the continued loss of meadow habitat and the increased predation on amphibian species by introduced fish.

   100403-1 102203-4

   Response: The Biological Evaluation (BE) found in the project file, made a determination that the project may affect individuals, but is not likely to result in a trend toward federal listing or loss of viability (p. 26). The EIS assumes fish populations will likely persist under each alternative through either self-sustaining reproduction or ongoing CDFG fish stocking (EIS, Section 3.8.7., p. 242). The Forest does not regulate fish stocking (EIS, Section 3.8.5., p. 239).

4. **Comment**: Scientific information shows that trout are the primary factor in the decline of MYLF. The EIS reference section fails to reference any of the current literature on the link between introduced trout and the decline of MYLF.

   102303-2

   Response: The EIS assumes fish populations will likely persist under each alternative through either self-sustaining reproduction or ongoing CDFG fish stocking (Section 3.8.7., p. 242). The Forest does not regulate fish stocking (Section 3.8.5., p. 239). See the Literature Cited section of the BE, found in the project file (p. 27-30).

5. **Comment**: Table 2-2 "may adversely impact individuals...MYLF." MYLF has already been proposed and found warranted for federal listing so the trend is already there. There are inadequate research studies and scientific information to know whether certain actions will result in a loss of viability. No specific viability analyses have been done for MYLF. Therefore, it is risky to speculate that an activity will not cause a loss of viability. I would maintain that a more reasonable conclusion is that any action that adversely affects them will result in a loss of viability.

   102303-2

   Response: See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to the YT and MYLF and the rationale for the determination of

effects (p. 22-26). See the Literature Cited section of the BE, found in the project file (p. 27-30).

6. **Comment**: On p. 229, it states, "in lakes supporting MYLF and with proposed repair and maintenance there would be no change in quantity of breeding, rearing, cover, or overwintering habitat." Based on the currently available scientific information, I do not believe this statement is true because maintaining the dams will perpetuate trout populations. Because fish are now in the altered MYLF habitat, the MYLF breeding, rearing, cover, and overwintering habitat are reduced, and eliminating the dams would increase habitat quality for MYLF. Thus, if the dams were removed and water levels were allowed to return to those governed by natural processes, fish predation would be reduced, and the quantity and quality of breeding, rearing, cover, overwintering, and feed habitat would increase.

   102303-2

   Response: See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to the YT and MYLF and the rationale for the determination of effects (p. 22-26). A determination has been made that the project may affect individuals, but is not likely to result in a trend toward federal listing or loss of viability (p. 26). The EIS assumes fish populations will likely persist under each alternative through either self-sustaining reproduction or ongoing CDFG fish stocking (EIS, Section 3.8.7., p. 242). The Forest does not regulate fish stocking (EIS, Section 3.8.5., p. 239).

7. **Comment**: A May 15, 2001 letter from Dr. Roland Knapp to Steve Brougher discusses the influence of the dams on MYLF. "By enhancing fish populations in dam-influenced streams and lakes, dams have likely increased predation pressure on MYLF by nonnative trout." Not only does maintaining and operating these dams have implications for native species such as the MYLF, but it blatantly violates the requirements of the Wilderness Act by actively manipulating the aquatic environment to enhance populations of nonnative species.

   102503-3

   Response: See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to the YT and MYLF and the rationale for the determination of effects (p. 22-26). The EIS assumes fish populations will likely persist under each alternative through either self-sustaining reproduction or ongoing CDFG fish stocking (EIS, Section 3.8.7., p. 242). The Forest does not regulate fish stocking (EIS, Section 3.8.5., p. 239).

8. **Comment**: Concerned that maintenance of the dams and the associated manipulation of streamflow will have damaging consequences for native amphibian species. Alternative 1 manages the ecosystem for the benefit of non-native trout species and jeopardizes MYLF and YT. Dams cause seasonal flooding of riparian and terrestrial meadow that is vital to the survival and recovery of these species. As the EIS indicates, "Dams interrupt the hydrological connectivity between lakes, streams, and meadows by creating barriers to upstream or downstream passage for aquatic-dependent species."

   102703-8

   Response: See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to the YT and MYLF and the rationale for the determination of

effects (p. 22-26). The EIS assumes fish populations will likely persist under each alternative through either self-sustaining reproduction or ongoing CDFG fish stocking (EIS, Section 3.8.7., p. 242). The Forest does not regulate fish stocking (EIS, Section 3.8.5., p. 239).

Amphibians/TES

9. **Comment**: The willow flycatcher, a federally-endangered species, is listed in the Forest Management Indicator Species list for the Forest; however, the EIS makes no determination of its presence in the project area or the Emigrant Wilderness. It should also include a determination of project-related impacts to this species.

   102203-4

   Response: The willow flycatcher is not a federally endangered species, but a Region 5 Sensitive Species (EIS, Section 3.7.2.). See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to the willow flycatcher and the rationale for the determination of effects (p. 19-21 and 26).

10. **Comment**: The FEIS should include additional information regarding project impacts on the ability to maintain viable populations of all sensitive species and determine the applicability of ESA Section 7 consultation.

    102203-4

    Response: See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to sensitive species and the rationale for the determination of effects (p. 18-26). See the BA, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to threatened and endangered (T&E) species and the rationale for the determination of effects. A Section 7 consultation is only necessary for T&E species.

11. **Comment**: Manmade manipulation of the dams has been occurring for over 50 years. Allowing the dams to deteriorate naturally would cause undue stress on wildlife.

    102703-1

    Response: See the BE, found in the project file, for the analysis of the direct, indirect, and cumulative impacts to sensitive species (p. 18-26). See EIS Section 3.7. for effects to wildlife.

Botany

12. **Comment**: EIS should state that concerns to sensitive plants can be mitigated.

    102703-1

    Response: Mitigation measures for botanical resources can be found in EIS Section 2.3. and in the Biological Evaluation for Sensitive Plants located in the project file.

Costs

13. **Comment**: The EIS used unrealistic costs for rehabilitating the dams based on all the specialist needs (divers, packers, etc), equipment mobilization, follow up inspections and long term monitoring. The cost of Forest Service planning and

support for the entire effort needs to be included. The long-term costs to monitor the dams for the next 100 years and the Forest Service's administration and maintenance costs should be better estimated.

101603-1

Response: Motorized equipment is prohibited in designated Wilderness and will not be used to implement this project. Maintenance cost estimates are for comparison purposes only and reflect an average of costs for all dams. Long-term monitoring costs were estimated. This is explained in Section 3.11 of the EIS.

Fishery

14. **Comment**: Fish are reported present between Y-Meadow and Bear Lake. Adverse impact on fish in the text should be modified to reflect the presence or absence of fish in this stretch. Encouragement of fish in this stretch should be balanced with the presence of MYLF. My understanding of the fishery in the Clavey watershed as a whole is that native fish move from location to location for spawning and for survival during dry periods.

    102703-4

    Response: The EIS discusses this on p.247.

Forest Plan or Policy

15. **Comment**: One of the Forest Goals is to "maintain wilderness in such a manner that ecosystems are unaffected by human manipulation..." The management emphasis within the Emigrant Wilderness is to "move the wilderness as a whole towards a more pristine condition..." Alternative 1 would allow aquatic ecosystems to be affected by human manipulation. Maintaining dams is not a natural process.

    102303-2

    Response: Law, regulation, and policy are one of the factors considered in the ROD. The affects of the alternatives on the natural environment are analyzed in the EIS. The ROD documents the decision and identifies reasons for the decision. Alternative 1 (Proposed Action) would move the wilderness, as a whole, towards a more pristine condition by discontinuing maintenance on 6 of the original 18 dams.

16. **Comment**: The Forest Service Manual directs all existing structures not essential to the administration, protection, or management for the wilderness purposes or not provided for in the designating legislation be removed. These dams were not addressed in the 1975 act establishing the Emigrant Wilderness. Therefore, they should be removed.

    102403-1 102603-2

    Response: Law, regulation, and policy are one of the factors considered in the ROD. The ROD documents the decision and identifies reasons for the decision.

17. **Comment**: In the most current Emigrant Wilderness Management Direction, it states that managing for wilderness values will always take priority over other values such as historic, fisheries, recreation, etc. The "ability of natural processes are to operate free of human influences" is key to maintaining the wilderness values according to this document. Many of the dams proposed to be maintained in OC 2, where aquatic

and hydrological processes are to operate naturally. Under OC 2, when standards are not met, management actions may be implemented to assure attainment. Is reconstructing, maintaining, and operating dams going to move the Emigrant towards a more pristine condition and have no effect on aquatic life and the hydrological processes?

102603-1

Response: The analysis in the EIS shows only short-term non-significant effects on wilderness opportunity class standards.

Historic

18. **Comment**: The dams are 1) not eligible for the National Register of Historic Places (NRHP), 2) shouldn't be eligible or 3) if eligible, shouldn't be treated the same as if they were on the NRHP. What is the criteria used to determine eligibility?

    101903-1 100303-2

    Response: Section 1.3.3. of the EIS acknowledges that seven dams are eligible (p. 4). Section 3.4.2.1. details how and when these dams were determined to be eligible (p. 168-171). In addition, Appendix B is devoted to National Register Criteria (p. 315-318). Forest Service management of historic properties is the same, whether they are eligible or formally listed on the NRHP.

19. **Comment**: Why weren't the dams evaluated for the California (CA) Register of Historical Resources? The oldest check dam (Yellowhammer) would qualify.

    102203-2

    Response: Properties listed or formally determined eligible for the NRHP are automatically listed on the CA Register. Criteria for listing on the CA Register of Historic Resources mirror criteria for listing on the NRHP, except that, for the CA Register, the highest level of historic significance is state (rather than the national level). The CA Register is primarily for use by state and local agencies, private groups, and citizens to identify the existing historical resources in the state. Yellowhammer Dam does not meet eligibility criteria.

20. **Comment**: Ensure that EO 13175 (Consultation and Coordination with Indian Tribal Governments) and EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) was completed.

    102203-4

    Response: The EIS Section 3.10.5 and Section 3.15 respond to EO 12898. Section 4.1.3 responds to EO 13175.

21. **Comment**: The FEIS should include information regarding management for Indian concerns regarding protection of traditional plants.

    102203-4

    Response: The Forest consulted with the Tuolumne Band of Me-Wuk. The EIS includes mitigation measures that avoid or minimize effects on plants.

22. **Comment**: Both the EIS and Minimum Requirement Worksheets indicate that historic values will be "irretrievably lost" or "compromised" if any of the NRHP eligible dams are not maintained. The National Historic Preservation Act does not require the dams be restored or preserved and the agency is at liberty to adequately record the historicity of these structures and let them deteriorate. These dams are relics of Fred Leighton's struggle to modify the wilderness and make it produce more fish. They are, however, intrusions on the historic value of the wilderness resource. Historically speaking, these dams are, to the resource of wilderness, as electric wiring or aluminum siding would be on a building originally constructed in 1800.

    102403-1 102703-3 102703-6
    102503-3 102703-5

    Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The ROD documents the decision and identifies reasons for the decision.

23. **Comment**: The "Historic Value Rating" on p. 169 of the EIS is applied to the NRHP dams "to measure their compatibility within the wilderness setting based on a point value system." The point system used to rate the structures and the overall value determinations are entirely arbitrary and provide no basis for determining "their compatibility within the wilderness setting."

    102503-3

    Response: This value rating does not determine compatibility. See Errata Section 3.4.3. Historic Values of Dams.

Hydrology

24. **Comment**: This section lacks a quantitative analysis. It is not clear how sediment released from deteriorating dams would not cause a "significant impact" on downstream water quality. Why, in the cumulative effects analysis, is it not expected to result in significant cumulative impacts on water quality, water yield or timing, or riparian resources within the analysis area? These statements seem to be purely qualitative statements.

    100303-1 100303-2

    Response: The gradual release of sediment from slowly (naturally) deteriorating dams would not cause significant long-term impacts on downstream water quality. Only minor amounts of fine sediment are accumulating above natural lake outlet level. Therefore, neither slow nor catastrophic deterioration of dams on natural lakes will likely result in significant amounts of stored sediment moving downstream, since it is highly improbable that sediment, once accumulated within the natural lake depression, will remobilize even with a catastrophic dam failure. Unless catastrophically breached, meadow maintenance dams would release sediment slowly as the dams deteriorate over time with little effect on downstream water quality. Catastrophic breaching may or may not move large quantities of stored sediment downstream at the time of breaching depending on the magnitude of flow required to cause the breach (a dam that has lost most of its structural integrity over time may catastrophically fail even in relatively small flow events that would result in little immediate erosion of stored sediments). In the worst-case scenario, the downstream effect would likely be an intermittent, short-term deterioration of water quality due to pulses of sediment entering the stream channels during storm events. This

would likely continue over a period of years until the system re-stabilized. The gradual release of sediment from these dams resulting from a slower, natural dam deterioration process would have less affect on water quality.

25. **Comment**: The impacts on the watersheds are repetitive and not fully developed. It appears that only the 12 dams proposed for retention are addressed and impacts will be addressed through BMP's but they are not described. There are no specific mitigation measures for the impacts.

    101303-1

    Response: The impacts for the dams with no maintenance are included in the analysis. See EIS, Sections 3.1.3.1. through 3.1.3.5., pages 58-72. BMPs are summarized in the EIS Section 2.3., p. 35 (see #18-20) and are listed fully in Section 3.1.3.5. (p. 71-72).

26. **Comment**: Effects on groundwater hydrology were not evaluated. The No Action alternative would seem to have an adverse effect on groundwater seeing that the meadows and lakes established by the dams would eliminate a large source of groundwater recharge and water resources in general.

    101303-2

    Response: The effect of the dams on general groundwater recharge within the Emigrant Wilderness would be extremely complex to analyze. Most of the wilderness is located on granite. Rather than infiltrating, most precipitation is either lost through evapo-transpiration or leaves the wilderness as surface water. Only a small percentage of the surface water will eventually reach the regional ground water table. The effect of the dams on the shallow ground water (water held in meadow and lakeside soils) was evaluated in the effect on riparian area and wet meadow loss or expansion. The No Action Alternative would allow groundwater recharge to return gradually to pre-dam conditions.

27. **Comment**: The headwaters of the Stanislaus and Tuolumne Rivers within the Emigrant Wilderness supply the primary domestic water source for several water agencies, including other down stream counties. An added 4,230 acre-feet of storage capacity, or 135% of natural water storage capacity, is provided by the existing check dams...The check dams function as sediment traps, preventing erosive materials in the Emigrant Wilderness from effecting down stream water quality.

    102203-2

    Response: These dams do not affect downstream water yield. The dams alter the natural movement of sediment through the system by temporarily (for the life of the dam) storing sediment. The dams may prevent a certain amount of natural sediment from moving downstream, over time, all natural lakes and meadows collect and retain sediment.

28. **Comment**: If the project involves the placement of fill or dredged material into waters of the U.S., a Clean Water Act Section 404 permit may be required. The FEIS should include a determination of the applicability of CWA 404(b)(1) Guidelines. If it is determined that an individual permit is required, the FEIS should document that the Least Environmentally Damaging Practicable Alternative was chosen as the preferred alternative as required by CWA Section 404 Guidelines.

    102203-4

Response: The Forest will consult with the US Army COE, Regional and State Water Quality Resource Control Boards and other relevant federal, state and local resource agencies as part of the Clean Water Act Section 404 Permit Process, Clean Water Act Section 401 Water Quality Certification Process, NPDES Permit Process, etc., prior to implementing individual dam repair/maintenance activities to ensure that individual projects comply with general permit conditions, CWA Section 404(b)(1) Guidelines, and other federal, State, and local regulations. Projects will be designed to avoid or minimize effects of water quality and all opportunities will be explored to ensure that the projects qualify for available permits.

Individual Dams

Bear Lake Dam

29. **Comment**: Bear Lake is one of the most popular destinations, so popular that use restrictions are in place. Not maintaining Bear Lake dam may promote more user density at other wilderness lakes. Bear Lake also has a high quality fishery supporting rainbow and brook trout. If CDFG is concerned about fish migrating down stream from Bear Lake, after all these years it would seem that the question of migration has already occurred.

    102203-2 102203-3

    Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The EIS shows no significant effects will occur from not maintaining Bear Lake dam.

Cow Meadow Dam

30. **Comment**: This dam should not be rebuilt nor should it be maintained because:

    - It has no historic value.
    - It has no significant ecological value.
    - It would require importing 500 new rocks. This is inconsistent with wilderness (bringing outside materials into any pristine, natural area).
    - It only increases the lake level by 2 feet.
    - It contains MYLF, which are significantly harmed by predation from trout. Keeping the lake higher will benefit trout at the expense of the threatened amphibian population.

    100403-1

    Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The EIS shows effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

Horse Meadow Dam

31. **Comment**: Horse Meadow, a component of the East Fork Cherry Creek ecosystem, is a productive meadow due to the amount of edge habitat provided by contact between emergent vegetation and open water. The open water areas are shallow and even removal of the dam as small as the one featured at Horse Meadow will lead to a drop in the water table, a reduction in the amount of open water, a loss of wetland habitat, and a drastic change in meadow carrying capacity. The net result will

be a concomitant reduction in wildlife diversity and wildlife use. Should the wetlands become a lodgepole thicket, a valuable and scarce resource would be lost.

102103-1 102203-2 102203-5

Response: The EIS shows no significant effects will occur from not maintaining Horse Meadow dam. The proposed action does not remove Horse Meadow dam, but allows it to deteriorate naturally. Since the water table is at its natural level now, not maintaining the dam will not change the water table.

Red Can Dam

32. **Comment**: Red Can Lake has minimal historic value and has no need or any justification for maintenance of its checkdam. It does not need maintenance at this time, it increases approximately one acre of pond habitat, and there are no fishing related reasons to maintain.

100403-1

Response: Red Can Dam is eligible for the NRHP. The Forest Supervisor considered this, along with all other comments, prior to making a decision. The EIS shows effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

33. **Comment**: Alternative 1 would have an adverse effect on Red Can dam since it is not proposed to be maintained. The EIS does not adequately explain why Red Can dam should not be maintained.

102203-2 102703-7

Response: Alternative 1 would have an adverse effect on Red Can (EIS, Section 3.4.5.1., p.171). Alternative 3 addresses maintenance of Red Can dam. The ROD documents the decision and identifies reasons for the decision.

Yellowhammer Dam

34. **Comment**: Although the amount of meadow maintained by Yellowhammer dam is small, it is a productive wildlife habitat, and its loss will result in a net loss of wetland habitat. Also, this was the first dam built and Fred Leighton's home base. If repaired, Yellowhammer dam could be eligible for the National Register.

101603-2 102103-1 102203-2

Response: Yellowhammer dam was evaluated and determined not eligible because it does not have *historic integrity* (36 CFR 800). Due to the existing condition of Yellowhammer dam, the EIS did not consider repair, as reconstruction would be necessary. The Forest Supervisor considered this, along with all other comments, prior to making a decision. The EIS shows no significant effects will occur from not maintaining Yellowhammer dam.

Y-Meadow Dam

35. **Comment**: Y-Meadow reservoir should not be maintained because:

- It has flooded the largest wet meadow-riparian habitat area and the restoration of that habitat would greatly benefit at-risk amphibians, wildlife, stock, and other species.

- Maintaining has a minor, but discernable effect on the overall W&SR values of the Clavey and its tributary.
- It is the largest, most obtrusive, least attractive dam with the greatest visual impact.
- It is not regulating streamflow now since the valve is blocked and cannot be opened.
- It was not originally a body of water and is not serving the purpose for which it was erected. There are no fish.
- There would be no effect to downstream trout and MYLF populations.
- There is a lack of viable campsites and natural supplies of firewood.
- It has no historical significance.
- If repaired, the outlet valve would cause accumulated sediment to move downstream.
- If Bear Lake dam was allowed to deteriorate too, it would yield a completely free flowing Clavey River system.

100403-1 102203-3 102703-4 102703-6

Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The ROD documents the decision and identifies reasons for the decision.

36. **Comment**: The Forest Service should develop a plan for speeding up the restoration of the lost riparian wet meadow area through either breaching or other structural changes to speed the deterioration and decay of this highly visible artificial structure.

    100403-1 102703-6

    Response: This proposed action does not include restoration proposals. Any proposal for restoration activities such as accelerating deterioration of a dam requires additional site-specific analysis.

37. **Comment**: Did the study team make an estimate of leakage from Y-Meadow dam?

    102703-4

    Response: No estimate of the current leakage was determined.

38. **Comment**: How would you justify streamflow regulation by Y-Meadow dam in Alternative 1, as compared to "flow-maintenance" which is mentioned? Doesn't Forest Service wilderness objectives and policies, point 2 (EIS p. 75) rule out streamflow regulation as being human influence? Streamflow regulation for this or any of the 18 was not mentioned as an anticipated operation in any of the congressional papers reprinted in the EIS.

    102703-4

    Response: Streamflow maintenance is accomplished through streamflow regulation of the valves. Law, regulation, and policy is one of the factors considered in the ROD. The EIS shows effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

39. **Comment**: Prioritize native amphibians, fish population protection, and habitat restoration. A charter California Wild Trout Water, the Clavey River possesses one of the few large drainages in the Sierra Nevada containing primarily native fish. The Clavey River's strain of rainbow trout is also thought to be a genetically unique. In addition to the Clavey's fish populations, species such as MYLF and YT rely on the

Clavey watershed's riparian area's health. Y-Meadow reservoir drowns the largest amount of important habitat for at-risk amphibians and other species by flooding the largest riparian habitat area affected by any of the checkdams. Prior to checkdam construction, 55% of the currently inundated acres were meadow habitat. Maintaining and rebuilding checkdams floods this crucial habitat, assists survival of introduced trout populations that prey on threatened amphibian's tadpoles, and detrimentally affects recovery prospects for imperiled riparian-dependent species.

102703-6

Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The EIS shows effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

Joint Strategy

40. **Comment**: Congress was well aware of the dams and took no action to change the situation. Also, since CDFG had a permit for dam maintenance until 1988, it is clear the Forest Service understood it to be Congressional intent to maintain the dams. The proposed action meets a portion of this intent by maintaining 12 of the dams.

    102103-4

    Response: The Joint Strategy is one of the factors considered in the ROD. The ROD documents the decision and identifies reasons for the decision.

41. **Comment**: The EIS states that new survey and monitoring data are available for many of these areas. The FEIS should describe the relationship between this new data and the decision to maintain an additional 4 dams in addition to the 8 proposed by the Joint Strategy.

    102203-4

    Response: Part of the purpose and need is to move forward on the Joint Strategy. The EIS presents the current site-specific information for all 18 dams. The ROD explains how the decision moves forward on the Joint Strategy.

42. **Comment**: The Joint Strategy by a MOU between CDFG and the Forest Service with a "proposed strategy for management" of no maintenance for 10 dams lends itself to a prejudiced outcome. This unduly influences the Forest Service proposal of maintenance and repair of 12 of the existing 18 dams.

    102703-1

    Response: The EIS explains the Joint Strategy in Section 1.3.5. and Appendix A. The Joint Strategy is not an MOU and does not make site-specific decisions. The Joint Strategy identified six dams with no maintenance needed for fisheries.

43. **Comment**: Decision Framework: p. 7 of the Purpose and Need – These are all valid questions except for the 4th one. The FS/CDFG Joint Strategy assumes that some of the dams will be maintained and thus would skew the decision. The Joint Strategy cannot trump law, regulation, policy, or Forest Plan.

    102703-5

Response: The Joint Strategy does not trump law, regulation, policy, or Forest Plan. It is only one part of the purpose and need. The questions in the ROD replace the questions in the draft EIS.

Minimum Requirement

44. **Comment**: Does it meet "minimum necessary"? The biophysical effects shown are very short term and deal mostly with the repair work stage of the proposed action (supporting alt. 1). The proposed action will not change the wilderness experience from what it is now. ...will not affect the publics opportunity for discover, surprise, and self-discovery. ...most wilderness users are totally unaware of the existence of the dams. Once told...they could care less and only think that it adds to their experience.

    102103-4

    Response: Minimum requirement is one of the factors considered in the ROD. The ROD documents the decision and identifies reasons for the decision.

45. **Comment**: The dams are a "permanent improvement." It is true they were present before the Emigrant Wilderness was designated, yet they can in no way be construed as being necessary to the management of the wilderness. Minimum Requirement Decision Guide: "Agency employees entrusted with management of wilderness should set the highest standard possible when reviewing management practices in wilderness. Wilderness is intended to be managed differently from other public lands and this difference needs to be demonstrated to the public." The Forest Service persists in setting a much lower standard by continuing to propose maintenance of the Emigrant Wilderness dams despite clear direction to the contrary.

    102403-1 102503-3

    Response: The project files contain minimum requirement worksheets (EIS, Section 3.2.4., p.98). The ROD contains the determination. Minimum requirement is one of the factors considered in the ROD. The ROD documents the decision and identifies reasons for the decision.

46. **Comment**: There is no analysis showing that they meet the "minimum requirement" needed to protect wilderness character. The last 3 items on p. 76 have nothing to do with wilderness character and are irrelevant to determining whether a dam is the minimum necessary. Furthermore, no such determination is presented anywhere in the EIS, or even in the Minimum Requirement Decision Guide worksheets in the project file.

    102403-1 102503-3 102603-1 102603-2

    Response: The project files contain minimum requirement worksheets (EIS, Section 3.2.4., p.98). The ROD contains the determination.

47. **Comment**: Ten components have been used, utilizing four indicators. These indicators relate to recreational use of the Emigrant Wilderness and are irrelevant for determining the effects of the dams on wilderness character and whether any dam is the "minimum necessary."

    102503-3

Response: The Forest Plan, as amended, designates Opportunity Classes (OCs). OCs represent areas of opportunities for a combination of social, resource, and management conditions. Specific management objectives for each OC are described in Section 3.2.2.1 of the EIS. The four components selected are used to analyze the affects of the alternatives on wilderness character and values and to determine how well they meet OC objectives. The project files contain minimum requirement worksheets (EIS, Section 3.2.4., p.98). The ROD contains the determination.

48. **Comment**: Page 98 states, "To determine the effects of the alternatives to the Wilderness, the determination made is whether the action allows each affected area to retain its assigned OC or whether it moves the affected area outside of its assigned OC." This is not the question that needs to be answered. The determination that must be made is what the "minimum necessary" is, and it has nothing to do with OC. The next sentence states "Whether or not an action moves the affected area closer to the desired condition of a more pristine wilderness has been addressed in the 'Minimum Necessary for the Administration of Wilderness' evaluation found in the project file." Again, the determination that must be made is the "minimum necessary", not simply whether "an action moves the affected area closer to the desired condition of a more pristine wilderness", and it should be prominently featured in the EIS.

    102503-3

    Response: The Forest Plan, as amended, designates Opportunity Classes (OCs). OCs represent areas of opportunities for a combination of social, resource, and management conditions. Specific management objectives for each OC are described in Section 3.2.2.1 of the EIS. The four components selected are used to analyze the affects of the alternatives on wilderness character and values and to determine how well they meet OC objectives. The project files contain minimum requirement worksheets (EIS, Section 3.2.4., p.98). The ROD contains the determination.

49. **Comment**: "Wilderness values shall dominate over all other considerations." A chart provided by the Forest shows how each alternative meets goals, objectives, DFC, policy, etc. as stated in the Wilderness Act, FSM, and the Emigrant Wilderness Management Direction. The only alternative that can answer yes to all of the applicable items and is most responsive to wilderness values is Alternative 2.

    102503-3

    Response: Law, regulation, and policy are one of the factors considered in the ROD. The EIS shows the effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

Miscellaneous

50. **Comment**: The Forest has a legal and ethical responsibility to move away from its politically motivated proposed action and to look at each individual dam in light of the Wilderness Act, each dam's historic uniqueness, and the way each dam does or doesn't potentially manipulate the ecosystem to affect the species within the wilderness.

    100403-1

    Response: The EIS analyzes each dam individually.

NEPA

Alternatives

51. **Comment**: Two altematives not considered include a plan that would allow the dams to be systematically phased out and the complete removal of the dams coupled with a riparian restoration plan. This removal and restoration alternative mentioned would support the intent of the Wilderness Act by restoring the Wilderness to pristine condition. Recommendation: A wider range of altematives.

    100303-1

    Response: The No Action Alternative allows all of the dams to deteriorate naturally (EIS, Section 2.2.2., p. 27). The complete removal of the dams was considered but dropped because it did not meet Forest Plan direction (EIS, Section 2.4.1., p. 36).

52. **Comment**: The generation of the alternatives was not described. This could have been clearer to help the reader understand why the proposed action alternative was preferred over the heritage alternative.

    101303-2

    Response: The alternatives were generated based on the issues provided through public involvement. See Section 1.6. of the EIS for reference to which issue is responded to in each alternative. The rationale for the preferred alternative is not a part of the EIS. See CEQ 1502.14(e), requiring only the identification of the preferred alternative.

53. **Comment**: It is unclear how the Proposed Alternative was selected and how each of the other alternatives were evaluated. No specific weighting criteria or formal alternative analysis scheme was presented in the EIS. The lack of a formal decision making processes creates doubt on the credibility and objectivity of the preparers. Recommendation: An in depth description of the decision making process.

    100303-1

    Response: An EIS is a disclosure document only. Preparers provide unbiased, nonjudgmental information to the decision maker and the public. Ranking, weighted criteria, etc. are not appropriate in the EIS. The ROD documents the decision, along with the reasons for decision.

Effects

54. **Comment**: Y-Meadow check dam was noted in the EIS as providing habitat for the spinytail fairy shrimp, but that fairy shrimp is not listed as a special status species by either the state of federal programs.

    102203-2

    Response: The spinytail fairy shrimp is not a special status species. The Forest Service has a responsibility under the National Forest Management Act to consider all species.

Issues

55. **Comment**: Among these reasons for determining an issue to be non-significant is "conjectural and not supported by scientific or factual evidence." This suggests that sufficient study has not been performed to determine the effect that the dams have on

the environment. For example, the YT and MYLF have been proposed for listing as Endangered... The impacts on these species by the dams are not evaluated.

100303-2

Response: If an issue is deemed non-significant due to it being conjectural, that is because the respondent (public) did not provide rationale supported by scientific or factual evidence for that issue. See EIS Section 1.7. and referenced CEQ regulations. The impacts of the dams on YT and MYLF can be found in Chapter 3 of the EIS.

Miscellaneous

56. Comment: Presenting the data analyzed could demonstrate that actual data was gathered; instead, it appears that many assumptions were made. The writers stated that monitoring and sampling was done, but never presented the data or referenced it to support the assumptions.

101303-2

Response: References to data used in the analysis was provided throughout the document. For example, water quality studies were referenced at 3.1.2.6.2 (EIS, p. 49), the Wilderness and Visual Resource sections repeatedly referenced the Forest Plan and the Emigrant Wilderness Management Direction, Heritage referenced the various inventories conducted to determine eligibility, Fisheries made many references to data from CDFG and other researchers, etc. The Reference section begins on p. 307 of the EIS.

Mitigation

57. Comment: The mitigation measures common to all action alternatives were listed before the impacts had been stated. But how/why can we mitigate, if impacts have not been predicted? For example, maintenance trails would be kept out of meadow areas of known potentially threatened species habitats, but would their mitigation measures for the inherent impacts effect the potentially threatened species habitat? Also, some possible mitigation measures were left out, such as the mitigation for mining sand that is used for mixing mortar. None of the mitigation measures discuss what events would occur if the mitigations were unsuccessful.

101303-1 101303-2

Response: The interdisciplinary team identified mitigation measures during the development of alternatives and they are designed to minimize or avoid impacts. The effects displayed in Chapter 3 assume implementation of the mitigation measures. The analysis shows no significant environmental affects will occur with implementation of the identified mitigation measures. Additional mitigation measures are not needed.

58. Comment: Although a list of mitigation measures were printed in the EIS, they only potentially minimize the proposed construction efforts and do not suggest further restoration of habitat in the construction areas. A mitigation monitoring plan (MMP) is also lacking. The MMP would ensure that the proposed mitigation measures and BMPs are effective in reducing the impacts to insignificant.

101303-3

Response: The analysis shows no significant environmental effects will occur with implementation of the identified mitigation measures. Additional mitigation measures are

not needed. Standard Forest Service procedures include post project inspections to ensure required mitigations and approved activities are accomplished.

Public Involvement

59. **Comment**: It is unclear whether the public was scoped for the development of alternatives. It appears public input was for developing ideas for the affected environment. There is no evidence public meetings took place. The preparers need to explain what is driving the EIS because the preparation of a forest management plan and the maintenance of dams should be separate projects. Responses to substantive comments should be provided.

    101303-2 101303-3 102203-4

    Response: Public scoping is to "determine the scope of issues to be addressed and for identifying the significant issues related to a proposed action" (CEQ 1501.7). The interdisciplinary team developed the alternatives based on issues brought forth by the public. Scoping efforts did not include public meetings. See Section 1.6. Public Involvement (EIS, p. 10). What is driving the EIS is explained in the Purpose and Need, Section 1.3. (EIS, p. 3). This is not a forest management plan, but a project to determine whether 18 dams should be maintained or not maintained. This document (Appendix E) is the Response to Public Comments as required by CEQ 1503.4.

Purpose and Need

60. **Comment**: The introduction of the "Preferred Alternative" within the "Purpose and Needs Statement" is unorthodox and may immediately bias the reader to this alternative; the purpose and need (PN) statement becomes limited to very specific criteria. This creates a narrow view of the actual PN, and in fact, tends to obscure the actual PN. A more general statement would allow for a wider range of alternatives to be considered. Recommendation: A broader PN statement.

    100303-1

    Response: The Preferred Alternative is not in the Purpose and Need section of either the EIS (p. 3) or Summary document (p. 1). Only the cover abstract identifies a preferred alternative. The Purpose and Need answers the questions "why here?" and “why now?" for the proposed action. CEQ regulations at 1502.14 do not require a wide range of alternatives, but a range of reasonable alternatives.

61. **Comment**: A more goal oriented Purpose and Need statement would go a long way in helping make the issues involved in this project clearer. The first two items describe why a plan for the dams is needed, instead of defining goals. The purpose and need statement for this project is not an objective statement that will lead the project in the proper direction. The PN statement read more like a background of the dams within the Emigrant Wilderness area. To have these goal in the PN statement should call for establishing why the purpose of restoring the dams is important for the wilderness and why it is important for the dams to be restored now.

    100303-2 101303-1 101303-2

    Response: The purpose and need answers the questions "why here?" and “why now?" for the proposed action.

New Alternatives

62. **Comment**: An alternative should have been investigated that restored the structures without restoring the release valves. This would be substantially less expensive then the preferred alternative. Another alternative would be to completely restore the dams, but refrain from operating them. According to Chapter 3, the inoperation of the streamflow maintenance dams has little or no effect on the current status of downstream fisheries, livestock and power generation. It seems that a large part of value lies in the increased lake levels they create.

    100303-2

    Response: The ROD, Decision to be Made section, includes the options available to the Forest Supervisor for selection and/or modifying any alternative.

63. **Comment**: Recommend a modified Altemative 3:

    - Maintain only those dams determined to have a high level of eligibility for historic significance (Bigelow, Emigrant Meadow, Emigrant Lake, Red Can, Leighton, Long, and Lower Buck).
    - Delete Red Can because tiny and unimportant to fish or pro-dam advocates and doesn't provide historic value.
    - Delete Lower Buck since it would have the same result for downstream fish in Wood Lake as would dam repair and operation. Since streamflow manipulation is in direct conflict with the Wilderness Act, and the dam has relatively minor effect on fish overall in the West Fork Cherry Creek watershed, there is no justification for maintaining.
    - No artificial manipulation of streamflows through plumbing management would be allowed in the remaining 5 dams.
    - Designate the 13 remaining dams for non-maintenance.
    - Separate NEPA analysis to determine what strategy would best restore the flooded wet meadow-riparian habitat at Y-Meadow.

    100403-1

    Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The ROD, Decision to be Made section, includes the options available to the Forest Supervisor for selection and/or modifying any alternative. The ROD documents the decision and identifies reasons for the decision.

64. **Comment**: It appears 2 of the 3 meadow maintenance dams may now have served their purpose. The County respectfully requests that Alternative 1 be adopted, but that it be modified with the inclusion of Red Can, Yellowhammer, Bear, and Horse Meadow dams.

    102203-2

    Response: The Forest Supervisor considered this, along with all other comments, prior to making a decision. The ROD, Decision to be Made section, includes the options available to the Forest Supervisor for selection and/or modifying any alternative. The ROD documents the decision and identifies reasons for the decision.

Social and Economic

65. **Comment**: Under the "no action" alternative, presenting a "worst case scenario" in which all of the fishing potential will disappear, is unsupported by data and is, in the words of the author, "unlikely." However, this information is presented in Table 3-40 and implies that the "No Action" alternative would be an extremely costly scenario for the local economy. Where the preparers obtained the information for this table is not stated.

    100303-1

    Response: The narrative interpreting the table provides the source of the information (i.e. Emigrant Wilderness Management Plan, pp. 160-161, Section 3.8, Section 3.10.1.2.). The narrative also states "...within the context of the total estimated travel-related spending, $728 million in 2001 for the local region, it is difficult to say the effect on the local economy would be significant for any of the alternatives (EIS, p. 295, 3.10.4.1.).

66. **Comment**: Trout-fishing and its socio-economic draw of wilderness seekers will not even remotely be significantly affected one way or the other by maintaining or not maintaining specific checkdams. The EIS purports to suggest that not maintaining checkdams might negatively influence the local recreation-based economy because if "dams are not present, there may be fewer visitors entering the wilderness because there may be less water in the lakes. Less water in the lakes could mean less fish for anglers." (p. 11)

    100403-1

    Response: Page 11 describes public issues resulting from scoping. See Section 3.10. of the EIS for the social and economic analysis.

67. **Comment**: The social and economic impacts appear overstated because in earlier pages you made the point the Emigrant Wilderness has more lakes per acre than almost any other wilderness. Thus the lowering of 18 of those lakes, some already having no fish, will have little impact on catch or on the attractiveness of this area to visitors. Visitors come for values other than the size of these 18 reservoirs.

    102703-4

    Response: The EIS shows effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

Visual Resources

68. **Comment**: Maintaining checkdams creates visual impacts that conflict with the intent to maintain wilderness areas as natural places with scenic resources undisturbed by artificial structures or the handiwork of man. On p. 13 of the Summary, the viewpoint is misleading when it implies that with only 18 of 100 lakes subject to the bathtub ring visual impact, the issue is pretty minor. Not so. Those 18 are the key to many visitors "feel" for the wilderness values. Most of these lakes are on main trails, many are favored camping areas, etc.

    102703-6 091203-2

    Response: The effects on the visual environment were considered by the Forest Supervisor along with all other resource effects and public comments prior to making a

decision. Whether at high use areas, or more remote areas, the "bathtub ring" is a natural occurrence throughout the wilderness.

69. **Comment**: 17 of the 18 check dams are barely noticeable since they are less than 10 feet tall. Only Y-Meadow is over 10 feet tall, being 25 feet tall. The wilderness and the scenic values might be mitigated by the Forest Service by designing screens trees, shrubs, and native vines to disguise those check dams that appear to evidence man's hand into the wilderness. If these structures could be disguised to appear "untrammeled by man", the retention of the check dams could be found to be consistent with the Forest Plan, the Emigrant Wilderness Management Plan, and with the County's economic goals to promote a better visitor experience.

    102203-2

    Response: This type of mitigation was considered, but not included in the alternatives, as landscape screening is also unnatural.

Wild and Scenic River

70. **Comment**: Bear Lake is on the portion of Lily Creek proposed for W&SR status. The EIS acknowledges that the "scenic condition may reduce as the volume of the lake reduces" with the loss of the dam at Bear Lake. A point of contention raised by some public has been that the check dams in the Emigrant Wilderness would not be consistent with the future designation for some waterways within the Emigrant Wilderness as "W&SR". Such a designation within a wilderness seems redundant... Therefore, the lack of maintenance of Bear Lake dam should not be decided based upon some future W&SR designation.

    102203-2

    Response: Lily Creek is eligible and proposed for W&SR designation. The presence or absence of the dam at Bear Lake has no effect on that status. The Forest Plan direction for the portion of Lily Creek within the Emigrant Wilderness includes dual designation as W&SR within wilderness.

Wilderness

71. **Comment**: Increased traffic of people and pack animals used for the restoration requirements was also omitted in adjusting the environment. The effect of increased traffic could diminish the aesthetics of the wilderness for those visiting. Native animals may see the livestock used for packing in materials as invaders and may become threatened. Feed used for the livestock would be certified weed free but still may introduce non-native plants.

    101303-2

    Response: The increased traffic of people and pack animals was considered in the analysis. See 3.2.4.1. through 3.2.4.3. (EIS, p. 99-133) and 3.6.4.1. through 3.6.4.3. (EIS, p. 200-21). Mitigation measures incorporated into this document are accepted practices.

72. **Comment**: Webster's definition of wilderness area is "an often large tract of public land maintained essentially in its natural state and protected against introduction of intrusive artifacts." What this document needs to address is the "correct" definition of wilderness and how the dams fit into it. Information left out of the assessment would

be how wilderness, as an intrinsic value, is further affected when the dams are left to exist, thus allowing non-native fish to exist in the river system.

101303-2

Response: The EIS uses the definition of wilderness as provided in the Wilderness Act of 1964, Section 2(c). Effect on resources, including Wilderness (Section 3.2.), Fish (Section 3.8.) and Social and Economic (Section 3.10.) are in the EIS.

73. **Comment**: In the cumulative effects section, 10 years was used to analyze human influences and actions have shaped the watersheds. I would contest this statement: humans have influences these watersheds since the first stocking of fish in the lakes, thus being shaped by humans for the last 110 years.

    101303-2

    Response: The Errata (see 3.2.4. Effects to Wilderness Character) includes a clarification. Humans have influenced their environments since they established presence. For analysis purposes and to meet CEQ regulations 1508.7, 10 years was used to look at past management actions and their cumulative effects within the project areas.

74. **Comment**: Each dam system was assigned an opportunity class based on the current conditions of the wilderness. This evaluation limits the wilderness environment to the environment experienced by humans. This implies that the important aspects of the affected wilderness are what human beings expect of the wilderness experience. This section was confusing, and in some cases, a meaningless collection of various criteria and indicators for assessing the effects on wilderness character, and it demonstrates a profound misunderstanding of what wilderness character means.

    101303-2 102503-3

    Response: The Forest Plan, as amended, designates Opportunity Classes (OCs). OCs represent areas of opportunities for a combination of social, resource, and management conditions. Specific management objectives for each OC are described in Section 3.2.2.1 of the EIS. The four components selected are used to analyze the affects of the alternatives on wilderness character and values and to determine how well they meet OC objectives.

75. **Comment**: The FEIS should clarify that Alternative 1 is consistent with Wilderness Objectives and Policy. Both Alternative 3 and the Joint Strategy Alternative would have less impact on wilderness conditions and reduce the evidence of human development.

    102203-4

    Response: Law, regulation, and policy are one of the factors considered in the ROD. The EIS shows effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision. The EIS does not consider, in detail, a Joint Strategy Alternative.

76. **Comment**: The Proposed Action moves the wilderness, as a whole, towards a more pristine condition by maintaining 12 dams and allowing 6 to deteriorate naturally.

    102103-4

Response: The ROD documents the decision and identifies reasons for the decision.

77. **Comment**: The creation and fish stocking of artificial lakes is a significant problem in high-elevation wilderness areas. These dams fundamentally change and impair the wilderness qualities of the landscapes in which they are found, and cannot be reconciled with a true wilderness, even if they existed prior to that designation. The dams would constitute a "permanent improvement" if they were to be further maintained, and this would not be consistent with the character of a wilderness area.

    101703-1

    Response: The Forest does not regulate fish stocking (Section 3.8.5., EIS, p. 239). The Forest Supervisor considered this, along with all other comments, prior to making a decision.

Wilderness Act

78. **Comment**: The Proposed Action does not follow the intent of the Wilderness Act because:

    - Natural hydrologic processes are not operating "free of human influence."
    - It violates the "wilderness area will be untrammeled" statement
    - The fishery is not naturally occurring or supporting native species.
    - Regulating streamflows does not allow native plants and animals to "develop and respond to natural forces."
    - It maintains artificial permanent improvements.
    - Historic structures should only be kept if they are deemed to be so unique and so valuable for their historic attributes that they override the intent of the Wilderness Act.
    - It maintains structures that create a visual impact, which is in conflict with maintaining as a natural area not disturbed by the presence of artificial structures. The fact that "they tend to dominate the visual environment in the vicinity" (EIS) is enough to disqualify them from the requirement of being "substantially unnoticeable."
    - Construction and rebuilding flies in the face of managing the area for pristine, natural conditions.
    - It sets a disastrous precedent for the very concept of wilderness.
    - Since Cow Meadow dam no longer exists, rebuilding it is illegal.
    - When PL 93-632 passed, Congress did not see fit to make a special provision to provide for the maintenance of these dams. Congress has made such special provisions in a number of other Acts adding new wilderness to the system. Congress passed additional legislation in 1984 to improve the wilderness by adding 6,100 acres. Again, even though it was aware of the controversy, it chose not to make a special provision to have the dams maintained.

100303-1	101303-3	102603-1	102703-8
100403-1	101603-3	102703-5	
101303-1	102403-1	102703-6	

Response: The continuing controversy surrounding the management of the dams is part of the purpose and need for this decision. Law, regulation, and policy is one of the factors considered in the ROD. The EIS shows the effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

79. **Comment**: The Proposed Action does follow the intent of the Wilderness Act because:

    - The assumption that no acres are lost in Alternative 2. Allowing the dams to deteriorate would result in loss of riparian areas since less water downstream would occur and since areas around the lakes that are now wet would become dry with reduced water levels. This further supports the conclusion that Alternative 1 meets this definition of wilderness.
    - Pages 74-75 of the EIS show statements by the Forest Service and Congress that the dams are inconspicuous or unnoticeable. Not only was the intent of the law to maintain the dams, we also feel that had lawmaker not agreed to maintain the dams, the Emigrant would have never been added to the wilderness preservation system.
    - The EIS shows a short-term impact of loss of solitude during repair work. This is true, but it is an extremely minor impact, comparable to large trail crews doing trail maintenance or administrative visits by the Forest Service. The proposed action will also promote fishing, a primitive and unconfined recreational activity.
    - Historical and scenic values are protected.

    102103-4 102303-4

    Response: The continuing controversy surrounding the management of the dams is part of the purpose and need for this decision. Law, regulation, and policy is one of the factors considered in the ROD. The EIS shows the effects of the alternatives on the natural and social/cultural environments. The ROD documents the decision and identifies reasons for the decision.

80. **Comment**: The EIS states that 7 check dams have been determined by the Forest Service to be eligible for the National Register. However, the 1964 Wilderness Act provides for the retention of structures, which are designated as historical, in the wilderness pursuant to the National Historic Preservation Act.

    102203-2

    Response: Alternative 3 allows for the maintenance and repair of all 7 dams that are eligible for the NRHP.

LIST OF RESPONDENTS

Table E-1 Respondents by ID Number

ID Number	Name
090903-1	Hix, Steve
091203-1	Vertin, James R.
091203-2	Smith, Jerry
091303-1	Yesavage, Jerome M.D. – California Trout
091603-1	Parrott, Blair
091903-1	Gershenson, Alexander
092003-1	Tinklenberg, Jared R.
092303-1	Eakle, Wade L. – Department of the Army
100303-1	Sorter, Andrew
100303-2	Fox, Noah
100403-1	Buckley, John – Central Sierra Environmental Resource Center
100503-1	Phelan, James and Jerry Marshall – Tuolumne County Sportsmen, Inc.
100603-1	Sikes, Nancy – Tuolumne County Visitors Bureau
100903-1	Segarini, George – Tuolumne County Chamber of Commerce
101303-1	Wetzel, Jeff
101303-2	Sorum, Greg S.
101303-3	White, Louie
101603-1	Livingston, John
101603-2	Phelan, Jim
101603-3	Wolverton, William H.
101703-1	Steitz, Jim
101803-1	Stryker, Morgan
102103-1	Maddox, James P.
102103-3	Schaffer, Joe
102103-4	Bloom, Bart
102203-1	Bowman, Steve D.
102203-2	Thornton, Mark V. – Tuolumne County Board of Supervisors
102203-3	Krause, Kenneth E.
102203-4	Hanf Lisa B. – Environmental Protection Agency
102203-5	Keyser, Dale
102303-1	Sanderson Port, Patricia – Office of Environmental Policy & Compliance
102303-2	Matthews, Kathleen R.
102303-3	Stevens, Roger Sr. – TuCare
102303-4	Bloom, Matt/Josh Bloom – Kennedy Meadows Resort and Aspen Meadow Pack Station
102403-1	Painter, Michael J. – Californians for Western Wilderness
102503-1	Murray, Michael
102503-2	Leatherman, Phil
102503-3	Brougher, Steve – Central Sierra Chapter, Wilderness Watch
102603-1	Esson, Randy & Sheila
102603-2	Foster, Don
102603-3	Suk, Tom
102703-1	DeMott, Bruce
102703-3	Hesselbarth, Woody
102703-4	Hackamack, Bob
102703-5	Worf, Bill
102703-6	Weakley, Monica – Tuolumne River Trust
102703-7	Dahlin, Leland and Shirley
102703-8	Barth, Sara – The Wilderness Society

Table E-2 Respondents by Name

Name	ID Number
Barth, Sara – The Wilderness Society	102703-8
Bloom, Bart	102103-4
Bloom, Matt/Josh Bloom – Kennedy Meadows Resort and Aspen Meadow Pack Station	102303-4
Bowman, Steve D.	102203-1
Brougher, Steve – Central Sierra Chapter, Wilderness Watch	102503-3
Buckley, John – Central Sierra Environmental Resource Center	100403-1
Dahlin, Leland and Shirley	102703-7
DeMott, Bruce	102703-1
Eakle, Wade L. – Department of the Army	092303-1
Esson, Randy & Sheila	102603-1
Foster, Don	102603-2
Fox, Noah	100303-2
Gershenson, Alexander	091903-1
Hackamack, Bob	102703-4
Hanf Lisa B. – Environmental Protection Agency	102203-4
Hesselbarth, Woody	102703-3
Hix, Steve	090903-1
Keyser, Dale	102203-5
Krause, Kenneth E.	102203-3
Leatherman, Phil	102503-2
Livingston,John	101603-1
Maddox, James P.	102103-1
Matthews, Kathleen R.	102303-2
Murray, Michael	102503-1
Painter, Michael J. – Californians for Western Wilderness	102403-1
Parrott, Blair	091603-1
Phelan, Jim	101603-2
Phelan, James and Jerry Marshall – Tuolumne County Sportsmen, Inc.	100503-1
Sanderson Port, Patricia – Office of Environmental Policy & Compliance	102303-1
Schaffer, Joe	102103-3
Segarini, George – Tuolumne County Chamber of Commerce	100903-1
Sikes, Nancy – Tuolumne County Visitors Bureau	100603-1
Smith, Jerry	091203-2
Sorter, Andrew	100303-1
Sorum, Greg S.	101303-2
Steitz, Jim	101703-1
Stevens, Roger Sr. – TuCare	102303-3
Stryker, Morgan	101803-1
Suk, Tom	102603-3
Thornton, Mark V. – Tuolumne County Board of Supervisors	102203-2
Tinklenberg, Jared R.	092003-1
Vertin, James R.	091203-1
Weakley, Monica – Tuolumne River Trust	102703-6
Wetzel, Jeff	101303-1
White, Louie	101303-3
Wolverton, William H.	101603-3
Worf, Bill	102703-5
Yesavage, Jerome M.D. – California Trout	091303-1